The CONSORT-EHEALTH checklist is intended for authors of randomized trials evaluating web-based and internet-based applications/interventions, including mobile interventions, electronic games (incl. multiplayer games), social media, certain telehealth applications, and other interactive and/or networked electronic applications. Some of the items (e.g. all subitems under item 5 - description of the intervention) may also be applicable for other study designs.

The goal of the CONSORT EHEALTH checklist and guideline is to be
a) a guide for reporting for authors of RCTs,
b) to form a basis for appraisal of an ehealth trial (in terms of validity)

CONSORT-EHEALTH items/subitems are MANDATORY reporting items for studies published in the Journal of Medical Internet Research and other journals / scientific societies endorsing the checklist.

Items numbered 1., 2., 3., 4a., 4b etc are original CONSORT or CONSORT-NPT (non-pharmacologic treatment) items.
Items with Roman numerals (i., ii, iii, iv etc.) are CONSORT-EHEALTH extensions/clarifications.

As the CONSORT-EHEALTH checklist is still considered in a formative stage, we would ask that you also RATE ON A SCALE OF 1-5 how important/useful you feel each item is FOR THE PURPOSE OF THE CHECKLIST and reporting guideline (optional).

Mandatory reporting items are marked with a red *. In the textboxes, either copy & paste the relevant sections from your manuscript into this form - please include any quotes from your manuscript in QUOTATION MARKS, or answer directly by providing additional information not in the manuscript, or elaborating on why the item was not relevant for this study.

YOUR ANSWERS WILL BE PUBLISHED AS A SUPPLEMENTARY FILE TO YOUR PUBLICATION IN JMIR AND ARE CONSIDERED PART OF YOUR PUBLICATION (IF ACCEPTED).
Please fill in these questions diligently. Information will not be copyedited, so please use proper spelling and grammar, use correct capitalization, and avoid abbreviations.

DO NOT FORGET TO SAVE AS PDF _AND_ CLICK THE SUBMIT BUTTON SO YOUR ANSWERS ARE IN OUR DATABASE !!!

Citation Suggestion (if you append the pdf as Appendix we suggest to cite this paper in the caption):
Eysenbach G, CONSORT-EHEALTH Group
CONSORT-EHEALTH: Improving and Standardizing Evaluation Reports of Web-based and Mobile Health Interventions
J Med Internet Res 2011;13(4):e126
URL: http://www.jmir.org/2011/4/e126/
doi: 10.2196/jmir.1923
PMID: 22209829

* Required
Your name *
First Last

Notenbomer

Primary Affiliation (short), City, Country *
University of Toronto, Toronto, Canada
RijksUniversiteit Groningen, Groningen, t

Your e-mail address *
abc@gmail.com
annette.notenbomer@gmail.com

Title of your manuscript *
Provide the (draft) title of your manuscript.
Effect of an e-health intervention to reduce sickness absence frequency among employees with frequent sickness absence: a randomized-controlled trial.

Name of your App/Software/Intervention *
If there is a short and a long/alternate name, write the short name first and add the long name in brackets.

EHI [E-health Intervention]

Evaluated Version (if any)
e.g. "V1", "Release 2017-03-01", "Version 2.0.27913"

Your answer
Language(s) *
What language is the intervention/app in? If multiple languages are available, separate by comma (e.g. "English, French")

Dutch

URL of your Intervention Website or App
e.g. a direct link to the mobile app on app in appstore (itunes, Google Play), or URL of the website. If the intervention is a DVD or hardware, you can also link to an Amazon page.

https://www.arboned.nu/umcgonderzoe

URL of an image/screenshot (optional)

Your answer

Accessibility *
Can an enduser access the intervention presently?

☐ access is free and open

☒ access only for special usergroups, not open

☐ access is open to everyone, but requires payment/subscription/in-app purchases

☐ app/intervention no longer accessible

☐ Other:

Primary Medical Indication/Disease/Condition *
e.g. "Stress", "Diabetes", or define the target group in brackets after the condition, e.g. "Autism (Parents of children with)"; "Alzheimers (Informal Caregivers of)"

Frequent sickness absence (SA) , i.e. ≥3
Primary Outcomes measured in trial *
comma-separated list of primary outcomes reported in the trial

Sickness absence frequency

Secondary/other outcomes
Are there any other outcomes the intervention is expected to affect?

total SA days, burn out, engagement and work ability

Recommended "Dose" *
What do the instructions for users say on how often the app should be used?

- [ ] Approximately Daily
- [ ] Approximately Weekly
- [ ] Approximately Monthly
- [ ] Approximately Yearly
- [ ] "as needed"
- [ ] Other:
Approx. Percentage of Users (starters) still using the app as recommended after 3 months *

- unknown / not evaluated
- 0-10%
- 11-20%
- 21-30%
- 31-40%
- 41-50%
- 51-60%
- 61-70%
- 71%-80%
- 81-90%
- 91-100%
- Other:

Overall, was the app/intervention effective? *

- yes: all primary outcomes were significantly better in intervention group vs control
- partly: SOME primary outcomes were significantly better in intervention group vs control
- no statistically significant difference between control and intervention
- potentially harmful: control was significantly better than intervention in one or more outcomes
- inconclusive: more research is needed
- Other:
Article Preparation Status/Stage *
At which stage in your article preparation are you currently (at the time you fill in this form)

○ not submitted yet - in early draft status
○ not submitted yet - in late draft status, just before submission
○ submitted to a journal but not reviewed yet
○ submitted to a journal and after receiving initial reviewer comments
○ submitted to a journal and accepted, but not published yet
○ published
○ Other:

Journal *
If you already know where you will submit this paper (or if it is already submitted), please provide the journal name (if it is not JMIR, provide the journal name under "other")

○ not submitted yet / unclear where I will submit this
○ Journal of Medical Internet Research (JMIR)
○ JMIR mHealth and UHealth
○ JMIR Serious Games
○ JMIR Mental Health
○ JMIR Public Health
○ JMIR Formative Research
○ Other JMIR sister journal
○ Other:

Is this a full powered effectiveness trial or a pilot/feasibility trial? *

○ Pilot/feasibility
○ Fully powered
Manuscript tracking number *
If this is a JMIR submission, please provide the manuscript tracking number under "other" (The ms tracking number can be found in the submission acknowledgement email, or when you login as author in JMIR. If the paper is already published in JMIR, then the ms tracking number is the four-digit number at the end of the DOI, to be found at the bottom of each published article in JMIR)

☐ no ms number (yet) / not (yet) submitted to / published in JMIR

☐ Other: ms #10821

TITLE AND ABSTRACT

1a) TITLE: Identification as a randomized trial in the title

1a) Does your paper address CONSORT item 1a? *
I.e does the title contain the phrase "Randomized Controlled Trial"? (if not, explain the reason under ‘other’)

☐ yes

☐ Other:

1a-i) Identify the mode of delivery in the title
Identify the mode of delivery. Preferably use “web-based” and/or “mobile” and/or “electronic game” in the title. Avoid ambiguous terms like “online”, “virtual”, “interactive”. Use “Internet-based” only if intervention includes non-web-based Internet components (e.g. email), use “computer-based” or “electronic” only if offline products are used. Use “virtual” only in the context of “virtual reality” (3-D worlds). Use “online” only in the context of “online support groups”. Complement or substitute product names with broader terms for the class of products (such as “mobile” or “smart phone” instead of “iphone”), especially if the application runs on different platforms.

| Subitem not at all important | 1 | 2 | 3 | 4 | 5 | Essential |
|-----------------------------|---|---|---|---|---|-----------|
|                             | ☐ | ☐ | ☐ | ☐ | ☐ | ☐         |

Does your paper address subitem 1a-i? *
Copy and paste relevant sections from manuscript title (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

E-health intervention
1a-ii) Non-web-based components or important co-interventions in title

Mention non-web-based components or important co-interventions in title, if any (e.g., “with telephone support”).

| 1 | 2 | 3 | 4 | 5 | subitem not at all important | essential |
|---|---|---|---|---|----------------------------|-----------|

Does your paper address subitem 1a-ii?

Copy and paste relevant sections from manuscript title (include quotes in quotation marks “like this” to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study.

The co-intervention in the second intervention arm, i.e. consultation with an occupational physician, is not included in the title as only 3 participants visited the OP upon invitation. We could not draw any conclusion on the effect of blended care (EHI-tool combined with an OP consultation). We could only draw conclusions on the effect of the e-health intervention as a stand-alone intervention.

1a-iii) Primary condition or target group in the title

Mention primary condition or target group in the title, if any (e.g., “for children with Type I Diabetes”)

Example: A Web-based and Mobile Intervention with Telephone Support for Children with Type I Diabetes: Randomized Controlled Trial

| 1 | 2 | 3 | 4 | 5 | subitem not at all important | essential |
|---|---|---|---|---|----------------------------|-----------|

Does your paper address subitem 1a-iii?

Copy and paste relevant sections from manuscript title (include quotes in quotation marks “like this” to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study.

"Effect of an e-health intervention to reduce sickness absence frequency among employees with frequent sickness absence: a randomized-controlled trial."
1b) ABSTRACT: Structured summary of trial design, methods, results, and conclusions

NPT extension: Description of experimental treatment, comparator, care providers, centers, and blinding status.

1b-i) Key features/functionality/elements/components of the intervention and comparator in the METHODS section of the ABSTRACT

Mention key features/functionality/elements/components of the intervention and comparator in the abstract. If possible, also mention theories and principles used for designing the site. Keep in mind the needs of systematic reviewers and indexers by including important synonyms. (Note: Only report in the abstract what the main paper is reporting. If this information is missing from the main body of text, consider adding it)

1 2 3 4 5
subitem not at all important ☐ ☐ ☐ ☐ ☐ essential

Does your paper address subitem 1b-i? *

Copy and paste relevant sections from the manuscript abstract (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

"We developed an e-health intervention, consisting of fully-automated feedback and advice, to use either as a stand-alone tool (EHI-only) or combined with consultation with an occupational physician (EHI-OP)."

"To evaluate the effect of an e-health intervention, with or without additional OP consultation, to reduce SA frequency for employees with frequent SA, versus care as usual (CAU)."

1b-ii) Level of human involvement in the METHODS section of the ABSTRACT

Clarify the level of human involvement in the abstract, e.g., use phrases like “fully automated” vs. “therapist/nurse/care provider/physician-assisted” (mention number and expertise of providers involved, if any). (Note: Only report in the abstract what the main paper is reporting. If this information is missing from the main body of text, consider adding it)

1 2 3 4 5
subitem not at all important ☐ ☐ ☐ ☐ ☐ essential
Does your paper address subitem 1b-ii?

Copy and paste relevant sections from the manuscript abstract (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

"We developed an e-health intervention, consisting of fully-automated feedback and advice, to use either as a stand-alone tool (EHI-only) or combined with consultation with an occupational physician (EHI-OP)."

1b-iii) Open vs. closed, web-based (self-assessment) vs. face-to-face assessments in the METHODS section of the ABSTRACT

Mention how participants were recruited (online vs. offline), e.g., from an open access website or from a clinic or a closed online user group (closed usergroup trial), and clarify if this was a purely web-based trial, or there were face-to-face components (as part of the intervention or for assessment). Clearly say if outcomes were self-assessed through questionnaires (as common in web-based trials). Note: In traditional offline trials, an open trial (open-label trial) is a type of clinical trial in which both the researchers and participants know which treatment is being administered. To avoid confusion, use "blinded" or "unblinded" to indicated the level of blinding instead of "open", as "open" in web-based trials usually refers to "open access" (i.e. participants can self-enrol). (Note: Only report in the abstract what the main paper is reporting. If this information is missing from the main body of text, consider adding it)

Does your paper address subitem 1b-iii?

Copy and paste relevant sections from the manuscript abstract (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

"Employees with frequent SA received invitational letters, which were distributed by their employers. The primary outcome measure was the number of register-based SA episodes 12 months after completing the baseline questionnaire. Secondary outcome measures were register-based total SA days and self-assessed burn out, engagement and work ability."
1b-iv) RESULTS section in abstract must contain use data
Report number of participants enrolled/assessed in each group, the use/uptake of the intervention (e.g., attrition/adherence metrics, use over time, number of logins etc.), in addition to primary/secondary outcomes. (Note: Only report in the abstract what the main paper is reporting. If this information is missing from the main body of text, consider adding it)

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| O | O | O | O | O | essential |

Does your paper address subitem 1b-iv?
Copy and paste relevant sections from the manuscript abstract (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

"A total of 82 participants were included in the analyses, 21 in the EHI-only group, 31 in the EHI-OP group and 30 in the care as usual group (CAU). We found no significant difference in SA frequency between the groups at 1-year follow-up. SA frequency decreased in the EHI-only group from 3 (IQR 3-4) to 1 episode (IQR 0.3-2.8), in the EHI-OP group from 4 episodes (IQR 3-5) to 3 episodes (IQR 1-4) and in the CAU group from 3 episodes (IQR 3-4) to 2 episodes (IQR 1-3)."

1b-v) CONCLUSIONS/DISCUSSION in abstract for negative trials
Conclusions/Discussions in abstract for negative trials: Discuss the primary outcome - if the trial is negative (primary outcome not changed), and the intervention was not used, discuss whether negative results are attributable to lack of uptake and discuss reasons. (Note: Only report in the abstract what the main paper is reporting. If this information is missing from the main body of text, consider adding it)

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| O | O | O | O | O | essential |
Does your paper address subitem 1b-v?
Copy and paste relevant sections from the manuscript abstract (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

"Among employees with frequent SA we found no effect from the e-health intervention as a stand-alone tool in reducing SA frequency, nor on total SA days, burn out, engagement or work ability. This may be due to low adherence to the intervention because of insufficient urgency to act. We cannot draw any conclusion on the effect of blended care (EHI-OP), i.e. the EHI-tool combined with an OP consultation, due to very low adherence to the OP consultation. An OP consultation could increase a sense of urgency and lead to more focus and appropriate support. As this was the first effectiveness study among employees with frequent SA, strategies to improve recruitment and adherence in occupational e-health are included."

### INTRODUCTION

#### 2a) In INTRODUCTION: Scientific background and explanation of rationale

#### 2a-i) Problem and the type of system/solution

Describe the problem and the type of system/solution that is object of the study: intended as stand-alone intervention vs. incorporated in broader health care program? Intended for a particular patient population? Goals of the intervention, e.g., being more cost-effective to other interventions, replace or complement other solutions? (Note: Details about the intervention are provided in "Methods" under 5)

| Subitem not at all important | Essential |
|-----------------------------|-----------|
|                             |           |
Does your paper address subitem 2a-i? *

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

"Frequent sickness absence (SA), i.e. ≥ 3 SA episodes in a year, is common in the Dutch working population and poses a problem for both employers and employees [1]. The prevalence of frequent SA was 5.8% in 2015 and 6.1% in 2016 among more than 600,000 employees working in small-medium sized companies under contract with a Dutch national occupational health service (OHS). In the Netherlands, the costs related to frequent SA can be estimated to be at least 100 mln euro per year (123 mln US dollars) [2] "

"To reduce SA frequency among employees with frequent SA an intervention is needed to address this wide range of issues. To reduce frequent SA and feel better, employees with frequent SA prefer to seek adequate (medical) help themselves [11]. They want help only when self-management fails [11]. Among published interventions to reduce SA, several studies showed successful reduction of SA in employees at high risk of future SA through face-to-face structured consultations with occupational health professionals [12-15]. However, consultations can be time-consuming and costly. In contrast, e-health interventions are low in cost and appeal to self-management. "

"To our knowledge, no e-health interventions have as yet been designed to reduce SA frequency among frequent absentees."

2a-ii) Scientific background, rationale: What is known about the (type of) system

Scientific background, rationale: What is known about the (type of) system that is the object of the study (be sure to discuss the use of similar systems for other conditions/diagnoses, if appropriate), motivation for the study, i.e. what are the reasons for and what is the context for this specific study, from which stakeholder viewpoint is the study performed, potential impact of findings [2]. Briefly justify the choice of the comparator.

| subitem not at all important | 1 | 2 | 3 | 4 | 5 | essential |
|-----------------------------|---|---|---|---|---|-----------|
|                             |   |   |   |   |   | essential |
Does your paper address subitem 2a-ii? *
Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

"To our knowledge, no e-health interventions have as yet been designed to reduce SA frequency among frequent absentees. We developed an E-Health Intervention (EHI) tool to advise employees with frequent SA as to how they could improve health and self-management. The theoretical framework for this EHI tool was based on the Job Demands – Resources (JD – R) model [28]. The JD – R model relates psychosocial work characteristics to outcome measures such as burn out, engagement, productivity and sickness absence [29-32], and provides keys for guidance and support [11,32]."

"In the Netherlands, OPs often play a role in work-related interventions to reduce SA as they are experts in health, work, sickness absence and prevention. They can also address factors from the JD-R model, advising (temporary) accommodations to reduce job demands and/or increase job resources. The role of OPs in effective reduction of SA [12,14,15] led us to include a blended care study arm, combining the EHI tool with a consultation with the OP."

2b) In INTRODUCTION: Specific objectives or hypotheses

Does your paper address CONSORT subitem 2b? *
Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

"The main objective of this study was to evaluate the effectiveness of the EHI tool without (EHI-only) and with OP consultation (EHI-OP), compared to care as usual (CAU), on SA frequency among employees with frequent SA. Secondary outcomes were the total number of SA days, burn out, work engagement, and work ability at 1-year follow-up. We conducted a process evaluation to evaluate adherence to the intervention."

METHODS

3a) Description of trial design (such as parallel, factorial) including allocation ratio
Does your paper address CONSORT subitem 3a? *
Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study.

"The main objective of this study was to evaluate the effectiveness of the EHI tool without (EHI-only) and with OP consultation (EHI-OP), compared to care as usual (CAU), on SA frequency among employees with frequent SA."

"The study was designed as a three-armed randomized-controlled trial and registered in the Dutch trial register”. "The source population (n=825) was prerandomized into three arms: intervention group 1 (EHI-only; n=270), intervention group 2 (EHI-OP; n=279) and control group (n=276)."

Does your paper address CONSORT subitem 3b? *
Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study.

There were no changes to methods after start of the inclusion.

3b-i) Bug fixes, Downtimes, Content Changes
Bug fixes, Downtimes, Content Changes: ehealth systems are often dynamic systems. A description of changes to methods therefore also includes important changes made on the intervention or comparator during the trial (e.g., major bug fixes or changes in the functionality or content) (5-iii) and other “unexpected events” that may have influenced study design such as staff changes, system failures/downtimes, etc. [2].

Does your paper address subitem 3b-i?
Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study.

"After finalization of the tool, we made no changes in the contents."
4a) Eligibility criteria for participants

Does your paper address CONSORT subitem 4a? *
Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

"Inclusion criteria were employees with frequent SA, i.e. 3 or more episodes of SA in the year prior to recruitment, irrespective of the causes or duration of sick leave. Exclusion criterion was inability to complete a questionnaire in Dutch."

4a-i) Computer / Internet literacy
Computer / Internet literacy is often an implicit "de facto" eligibility criterion - this should be explicitly clarified.

Does your paper address subitem 4a-i?
Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

Computer/internet literacy was implicitly included: "Exclusion criterion was inability to complete a questionnaire in Dutch."

4a-ii) Open vs. closed, web-based vs. face-to-face assessments:
Open vs. closed, web-based vs. face-to-face assessments: Mention how participants were recruited (online vs. offline), e.g., from an open access website or from a clinic, and clarify if this was a purely web-based trial, or there were face-to-face components (as part of the intervention or for assessment), i.e., to what degree got the study team to know the participant. In online-only trials, clarify if participants were quasi-anonymous and whether having multiple identities was possible or whether technical or logistical measures (e.g., cookies, email confirmation, phone calls) were used to detect/prevent these.

subitem not at all important 1 2 3 4 5 essential
Does your paper address subitem 4a-ii? *
Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

"Study participants were recruited from 21 Dutch organizations staffing >100 employees between December 2013 and December 2014. Of the participating organizations, 7 were in industry, 5 in commercial services and 9 in public services. The first author (AN) had prepared a list of all frequent absentees in the participating organizations (source population), based on the occupational health service register. All employees with frequent SA received from us invitational letters combined with informed consent forms, which were distributed by their employers. The letters contained logos from both the University of Groningen and the OHS. Upon signing the informed consent form, we sent a personal URL code, that gave access to the online questionnaire at baseline (T0)."

"Upon completion of the baseline questionnaire the intervention groups received fully-automated personal advice. The control group was thanked for participation upon completion of the questionnaire." "Participants in intervention group 2 received the same advices and documents as the EHI-only group, but were invited by e-mail to a preventive advisory consultation with the OP."

4a-iii) Information giving during recruitment
Information given during recruitment. Specify how participants were briefed for recruitment and in the informed consent procedures (e.g., publish the informed consent documentation as appendix, see also item X26), as this information may have an effect on user self-selection, user expectation and may also bias results.

| Subitem | 1 | 2 | 3 | 4 | 5 |
|---------|---|---|---|---|---|
| Not at all important | | | | | | essential |

Does your paper address subitem 4a-iii?
Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

"All employees with frequent SA received from us invitational letters combined with informed consent forms,"
Does your paper address CONSORT subitem 4b? *
Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

"Study participants were recruited from 21 Dutch organizations staffing >100 employees between December 2013 and December 2014. Of the participating organizations, 7 were in industry, 5 in commercial services and 9 in public services."

4b-i) Report if outcomes were (self-)assessed through online questionnaires
Clearly report if outcomes were (self-)assessed through online questionnaires (as common in web-based trials) or otherwise.

Does your paper address subitem 4b-i? *
Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

"The primary outcome measure was the number of register-based SA episodes 12 months after completing the online baseline questionnaire. Secondary outcome measures were register-based total SA days and self-assessed burn out, engagement and work ability."

4b-ii) Report how institutional affiliations are displayed
Report how institutional affiliations are displayed to potential participants [on ehealth media], as affiliations with prestigious hospitals or universities may affect volunteer rates, use, and reactions with regards to an intervention.(Not a required item – describe only if this may bias results)

Does your paper address subitem 4b-ii?
Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

"The letters contained logos from both the University of Groningen and the
5) The interventions for each group with sufficient details to allow replication, including how and when they were actually administered

5-i) Mention names, credential, affiliations of the developers, sponsors, and owners

Mention names, credential, affiliations of the developers, sponsors, and owners \[6\] (if authors/evaluators are owners or developer of the software, this needs to be declared in a “Conflict of interest” section or mentioned elsewhere in the manuscript).

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| ○ | ○ | ○ | ○ | ○ |

subitem not at all important

Does your paper address subitem 5-i?

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

"The authors would like to thank ArboNed for investing in the intervention as proposed. The authors would also like to thank Byelex, the software provider, who made the application to specification and enabled running the intervention."

5-ii) Describe the history/development process

Describe the history/development process of the application and previous formative evaluations (e.g., focus groups, usability testing), as these will have an impact on adoption/use rates and help with interpreting results.

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| ○ | ○ | ○ | ○ | ○ |

subitem not at all important

Does your paper address subitem 5-ii?
Does your paper address subitem 5-ii?
Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study.

"The theoretical framework for this EHI tool was based on the Job Demands – Resources (JD – R) model [28]. The JD – R model relates psychosocial work characteristics to outcome measures such as burn out, engagement, productivity and sickness absence [29-32], and provides keys for guidance and support [11,32]. We used tools from the mental health guidelines of the Netherlands Society for Occupational Physicians (NVAB) [33]. Furthermore, the EHI tool was based on the determinants of frequent SA according to focus group participants and their suggestions on how to reduce frequent SA, such as communication with management [11]. The intervention addressed these elements item-by-item."

"We pilot-tested the EHI tool in 12 frequent absentees from 3 non-participating organizations. We used their feedback on technical issues and understandability to improve the EHI tool."

5-iii) Revisions and updating
Revisions and updating. Clearly mention the date and/or version number of the application/intervention (and comparator, if applicable) evaluated, or describe whether the intervention underwent major changes during the evaluation process, or whether the development and/or content was “frozen” during the trial. Describe dynamic components such as news feeds or changing content which may have an impact on the replicability of the intervention (for unexpected events see item 3b).

Does your paper address subitem 5-iii?
Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study.

There was no revision.

5-iv) Quality assurance methods
Provide information on quality assurance methods to ensure accuracy and quality of information provided [1], if applicable.

Does your paper address subitem 5-iv?
Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study.
Does your paper address subitem 5-iv?

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study.

Your answer

5-v) Ensure replicability by publishing the source code, and/or providing screenshots/screen-capture video, and/or providing flowcharts of the algorithms used

Ensure replicability by publishing the source code, and/or providing screenshots/screen-capture video, and/or providing flowcharts of the algorithms used. Replicability (i.e., other researchers should in principle be able to replicate the study) is a hallmark of scientific reporting.

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Does your paper address subitem 5-v?

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study.

The program is owned by a private company and is not publicly accessible. A unique URL code is available to the editor and reviewers.

5-vi) Digital preservation

Digital preservation: Provide the URL of the application, but as the intervention is likely to change or disappear over the course of the years; also make sure the intervention is archived (Internet Archive, webcitation.org, and/or publishing the source code or screenshots/videos alongside the article). As pages behind login screens cannot be archived, consider creating demo pages which are accessible without login.

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Does your paper address subitem 5-vi?

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study.

Your answer
5-vii) Access

Access: Describe how participants accessed the application, in what setting/context, if they had to pay (or were paid) or not, whether they had to be a member of specific group. If known, describe how participants obtained "access to the platform and Internet" [1]. To ensure access for editors/reviewers/readers, consider to provide a "backdoor" login account or demo mode for reviewers/readers to explore the application (also important for archiving purposes, see vi).

Does your paper address subitem 5-vii? *

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

"Upon signing the informed consent form, we sent a personal URL code, that gave access to the online questionnaire at baseline (T0). "

5-viii) Mode of delivery, features/functionalities/components of the intervention and comparator, and the theoretical framework

Describe mode of delivery, features/functionalities/components of the intervention and comparator, and the theoretical framework [6] used to design them (instructional strategy [1], behaviour change techniques, persuasive features, etc., see e.g., [7, 8] for terminology). This includes an in-depth description of the content (including where it is coming from and who developed it) [1]," whether [and how] it is tailored to individual circumstances and allows users to track their progress and receive feedback" [6]. This also includes a description of communication delivery channels and – if computer-mediated communication is a component – whether communication was synchronous or asynchronous [6]. It also includes information on presentation strategies [1], including page design principles, average amount of text on pages, presence of hyperlinks to other resources, etc. [1].
"The intervention consisted of immediate fully-automated personalized online feedback, item-by-item. The addressed items were job demands (work pace, emotional demands and work-home interference), job resources (feedback, learning opportunities, supervisor support, co-worker support and autonomy), burn out, engagement, work ability, general health, chronic diseases, psychological health, lifestyle and BMI. For an overview of the intervention elements per item see Multimedia Appendix 3. The feedback per item consisted of the score, interpretation of the score, general advice on possibilities how to tackle this issue (in case of a poor score), reference to relevant internet sites for more information, further diagnostic tests or treatment, referral to people who could help (depending on the issue: manager, colleagues, HRM, occupation physician, social worker, GP). The advice often contained a link to documents with more detailed advice. The advice was based on NVAB guidelines, occupational health care practice and suggestions from focus group participants with frequent SA from a prior study [11]."

"Participants in intervention group 2 received the same advices and documents as the EHI-only group, but were invited by e-mail to a preventive advisory consultation with the OP."

"The control group received neither personalized advice nor support from the OP or researchers upon completion of the online questionnaire. Care as usual consisted of consultation with the OP at the request of the employer or control group participant. In case of long-term SA, participants were invited for a consultation with the OP to certify SA within 6 weeks of reporting sick."

**5-ix) Describe use parameters**

Describe use parameters (e.g., intended “doses” and optimal timing for use). Clarify what instructions or recommendations were given to the user, e.g., regarding timing, frequency, heaviness of use, if any, or was the intervention used ad libitum.

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Does your paper address subitem 5-ix?
Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study.

"In a process evaluation three months after baseline, adherence to the intervention was measured in the EHI groups, assessing reading the advice provided by the E-health tool and undertaking actions."

5-x) Clarify the level of human involvement
Clarify the level of human involvement (care providers or health professionals, also technical assistance) in the e-intervention or as co-intervention (detail number and expertise of professionals involved, if any, as well as "type of assistance offered, the timing and frequency of the support, how it is initiated, and the medium by which the assistance is delivered". It may be necessary to distinguish between the level of human involvement required for the trial, and the level of human involvement required for a routine application outside of a RCT setting (discuss under item 21 – generalizability).

subitem not at all important

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essential

Does your paper address subitem 5-x?
Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study.

"Participants in intervention group 2 received the same advices and documents as the EHI-only group, but were invited by e-mail to a preventive advisory consultation with the OP. The e-mail contained the name of the OP and the telephone number of the OP's secretary to make an appointment."

5-xi) Report any prompts/reminders used
Report any prompts/reminders used: Clarify if there were prompts (letters, emails, phone calls, SMS) to use the application, what triggered them, frequency etc. It may be necessary to distinguish between the level of prompts/reminders required for the trial, and the level of prompts/reminders for a routine application outside of a RCT setting (discuss under item 21 – generalizability).

subitem not at all important

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essential
Does your paper address subitem 5-xi? *
Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

Eligible participants received one reminder to participate when they had not yet been recruited

5-xii) Describe any co-interventions (incl. training/support)
Describe any co-interventions (incl. training/support): Clearly state any interventions that are provided in addition to the targeted eHealth intervention, as ehealth intervention may not be designed as stand-alone intervention. This includes training sessions and support [1]. It may be necessary to distinguish between the level of training required for the trial, and the level of training for a routine application outside of a RCT setting (discuss under item 21 – generalizability.

Does your paper address subitem 5-xii? *
Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

"Participants in intervention group 2 (EHI-OP) received the same advices and documents as the EHI-only group, but were invited by e-mail to a preventive advisory consultation with the OP (occupational physician)."

"The OPs from the 21 participating organizations received written information on the study (see Multimedia Appendix 4) and a personal explanation by the first author (AN) about the goal of the study and the possibility of consultations with participants. Moreover, AN explained that what was expected in this preventive consultation was the same as in preventive consultations initiated by the employee in non-research situations: mainly participants’ questions on health and SA in relation to work and how to influence the employee's health or (work) situation. This could lead to making a joint Plan-of-Action, but it was not obligatory."

6a) Completely defined pre-specified primary and secondary outcome measures, including how and when they were assessed
Does your paper address CONSORT subitem 6a? *

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study.

"The primary outcome measure was the number of register-based SA episodes 12 months after completing the online baseline questionnaire. At 1-year followup, the incident number of SA episodes was retrieved at the individual level from the occupational health service register, in which SA was recorded from the first day of sick leave to the day of return to work."

"The number of days of all SA episodes was cumulated to a total number of SA days at 1-year follow-up. Burn out, work engagement and work ability were measured at 1-year follow-up."

"Burn out was measured with the 9-item Utrecht Scale (UBOS)[32,36]. Work engagement was measured with the 9-item Utrecht Work Engagement Scale (UWES) [37]. Work ability was investigated with the first item of the Work Ability Index [38,39]."

All SA data were register based and measured in the year before baseline and the follow-up year. Burn out, work engagement and work ability were assessed at baseline and one-year follow-up.

6a-i) Online questionnaires: describe if they were validated for online use and apply CHERRIES items to describe how the questionnaires were designed/deployed

If outcomes were obtained through online questionnaires, describe if they were validated for online use and apply CHERRIES items to describe how the questionnaires were designed/deployed [9].

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Does your paper address subitem 6a-i?
Copy and paste relevant sections from manuscript text

The online questionnaire was based on validated questionnaires, that are extensively used in research in the online version. For sources see references for the secondary outcomes and work and population characteristics. "Burn out was measured with the 9-item Utrecht Scale (UBOS)"
"Work engagement was measured with the 9-item Utrecht Work Engagement Scale (UWES)"
"Work ability was investigated with the first item of the Work Ability Index (WAI)"

6a-ii) Describe whether and how “use” (including intensity of use/dosage) was defined/measured/monitored
Describe whether and how “use” (including intensity of use/dosage) was defined/measured/monitored (logins, logfile analysis, etc.). Use/adoption metrics are important process outcomes that should be reported in any ehealth trial.

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subitem not at all important ○ ○ ○ ○ ● essential

Does your paper address subitem 6a-ii?
Copy and paste relevant sections from manuscript text

"In a process evaluation three months after baseline, adherence to the intervention was measured in the EHI groups, assessing reading the advice provided by the E-health tool and undertaking actions. Actions assessed were a consultation with the OP, GP, specialists, paramedics, psychologist and additional actions such as tackling sources of stress, tackling work related problems and have a conversation at work about work related problems or solutions, lifestyle changes and other actions (open question). "

6a-iii) Describe whether, how, and when qualitative feedback from participants was obtained
Describe whether, how, and when qualitative feedback from participants was obtained (e.g., through emails, feedback forms, interviews, focus groups).

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subitem not at all important ○ ○ ● ○ ○ ○ essential
Does your paper address subitem 6a-iii?
Copy and paste relevant sections from manuscript text

Process evaluation

6b) Any changes to trial outcomes after the trial commenced, with reasons

Does your paper address CONSORT subitem 6b? *
Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

There were no changes

7a) How sample size was determined

NPT: When applicable, details of whether and how the clustering by care provides or centers was addressed

7a-i) Describe whether and how expected attrition was taken into account when calculating the sample size
Describe whether and how expected attrition was taken into account when calculating the sample size.

| subitem not at all important | 1 | 2 | 3 | 4 | 5 | essential |
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Does your paper address subitem 7a-i?

Copy and paste relevant sections from manuscript title (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study.

"In a pilot study, we found that frequent absentees had on average 3.79 (standard deviation 1.27) SA episodes in 2013-2014 in the total employee population of a large Dutch OHS. RCT intervention studies that include SA frequency as an outcome measure are scarce. No scientifically-based intervention effect was available as this was the first intervention study among employees with frequent SA on SA frequency. The RCT studies from Duijts et al. [13] and Kant et al. [15] are the closest scientific approaches to this intervention study, although targeted at a different population. Applying their results to our study on frequent absentees, we aimed in the original trial protocol for a reduction of 0.5 episodes (Cohen's $d=0.39$) with our focused intervention. Based on an alpha of 0.05 (two-tailed) and a power of 80%, a sample size of 103 was needed [46]. After further consideration, we included in the submission to the Medical Ethics Committee (METc), before the start of the study, a second sample size calculation to detect a difference of 1 SA episode per year (Cohen's $d=0.79$). This was based on our practice-based knowledge of relevant intervention effects in an occupational health setting. This calculation showed that we needed a minimum of 27 per group [46].

7b) When applicable, explanation of any interim analyses and stopping guidelines

Does your paper address CONSORT subitem 7b? *

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study.

We performed no interim analyses. We stopped recruiting once we did not receive new informed consent forms from employees from the participating organizations and the number of participants fulfilled our sample size criteria.

8a) Method used to generate the random allocation sequence

NPT: When applicable, how care providers were allocated to each trial group
Does your paper address CONSORT subitem 8a? *
Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

" random integers generated from www.random.org/integers. "

8b) Type of randomisation; details of any restriction (such as blocking and block size)

Does your paper address CONSORT subitem 8b? *
Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

Not applicable, there were no restrictions such as blocking and block size

9) Mechanism used to implement the random allocation sequence (such as sequentially numbered containers), describing any steps taken to conceal the sequence until interventions were assigned

Does your paper address CONSORT subitem 9? *
Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

"The source population (n=825) was pre-randomized into three arms: intervention group 1 (EHI-only; n=270), intervention group 2 (EHI-OP; n=279) and control group (n=276) by random integers generated from www.random.org/integers."

"Blinding. Participants were allocated to the intervention groups and control group before the study started. They were blinded for the group to which they were allocated until completion of the online questionnaire, whereupon they did (intervention groups) or did not (control group) receive a personalized advice."
10) Who generated the random allocation sequence, who enrolled participants, and who assigned participants to interventions

Does your paper address CONSORT subitem 10? *
Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

"The source population (n=825) was pre-randomized into three arms: intervention group 1 (EHI-only; n=270), intervention group 2 (EHI-OP; n=279) and control group (n=276) by random integers generated from www.random.org/integers."

11a) If done, who was blinded after assignment to interventions (for example, participants, care providers, those assessing outcomes) and how

NPT: Whether or not administering co-interventions were blinded to group assignment

11a-i) Specify who was blinded, and who wasn't
Specify who was blinded, and who wasn't. Usually, in web-based trials it is not possible to blind the participants [1, 3] (this should be clearly acknowledged), but it may be possible to blind outcome assessors, those doing data analysis or those administering co-interventions (if any).

Does your paper address subitem 11a-i? *
Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

"Participants were allocated to the intervention groups and control group before the study started. They were blinded for the group to which they were allocated until completion of the online questionnaire, whereupon they did (intervention groups) or did not (control group) receive a personalized advice. The first author (AN) knew to which group each individual belonged. SA data were retrieved and analyzed by another author (CR) who did not know to which group each individual belonged."
11a-ii) Discuss e.g., whether participants knew which intervention was the “intervention of interest” and which one was the “comparator”
Informed consent procedures (4a-ii) can create biases and certain expectations - discuss e.g., whether participants knew which intervention was the “intervention of interest” and which one was the “comparator”.

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Does your paper address subitem 11a-ii?
Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study.

"Participants were allocated to the intervention groups and control group before the study started. They were blinded for the group to which they were allocated until completion of the online questionnaire, whereupon they did (intervention groups) or did not (control group) receive a personalized advice."

11b) If relevant, description of the similarity of interventions
(this item is usually not relevant for ehealth trials as it refers to similarity of a placebo or sham intervention to a active medication/intervention)

Does your paper address CONSORT subitem 11b? *
Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study.

"Participants in intervention group 2 received the same advices and documents as the EHI-only group, but were invited by e-mail to a preventive advisory consultation with the OP."

12a) Statistical methods used to compare groups for primary and secondary outcomes

NPT: When applicable, details of whether and how the clustering by care providers or centers was addressed
Does your paper address CONSORT subitem 12a? *

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study.

"First, we investigated differences in outcomes at T1 between the EHI-only group, the EHI-OP group and the CAU group according to the intention-to-treat principle. Because of the non-normal distribution of incident SA episodes and days, we investigated differences by using the non-parametric Kruskall-Wallis test."

12a-i) Imputation techniques to deal with attrition / missing values

Imputation techniques to deal with attrition / missing values: Not all participants will use the intervention/comparator as intended and attrition is typically high in ehealth trials. Specify how participants who did not use the application or dropped out from the trial were treated in the statistical analysis (a complete case analysis is strongly discouraged, and simple imputation techniques such as LOCF may also be problematic [4]).


text

subitem not at all important

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Does your paper address subitem 12a-i? *

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study.

Missing information from follow-up assessments was imputed using BOCF (baseline observation carried forward).

12b) Methods for additional analyses, such as subgroup analyses and adjusted analyses
Does your paper address CONSORT subitem 12b? *
Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

"The intervention groups (EHI-only and EHI-OP) were merged, as all participants from these study arms had access to the same e-health intervention and only 3 (13%) participants from the EHI-OP group additionally consulted the OP upon invitation. We investigated the differences between the outcomes of the combined intervention groups and the control group by using the nonparametric Mann-Whitney U test."

X26) REB/IRB Approval and Ethical Considerations [recommended as subheading under "Methods"] (not a CONSORT item)

X26-i) Comment on ethics committee approval

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subitem not at all important ○ ○ ○ ○ ○ essential

Does your paper address subitem X26-i?
Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

"The Medical Ethics Committee of the University Medical Center Groningen approved the study (METc 2013/131).

x26-ii) Outline informed consent procedures
Outline informed consent procedures e.g., if consent was obtained offline or online (how? Checkbox, etc.?), and what information was provided (see 4a-ii). See [6] for some items to be included in informed consent documents.

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subitem not at all important ○ ○ ○ ○ ○ essential
Does your paper address subitem X26-ii?
Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study.

"Upon signing the informed consent form, we sent a personal URL code, that gave access to the online questionnaire at baseline (T0)."

X26-iii) Safety and security procedures
Safety and security procedures, incl. privacy considerations, and any steps taken to reduce the likelihood or detection of harm (e.g., education and training, availability of a hotline)

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Does your paper address subitem X26-iii?
Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study.

Your answer

RESULTS

13a) For each group, the numbers of participants who were randomly assigned, received intended treatment, and were analysed for the primary outcome

NPT: The number of care providers or centers performing the intervention in each group and the number of patients treated by each care provider in each center
Does your paper address CONSORT subitem 13a? *

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study.

See figure 1, flow chart of participants.

"Three participants out of 30 (10%) in the EHI-OP group reported that they had consulted the OP upon study invitation. " "In total 17 participants did not fill out the last questionnaire. Included in the analysis were: n=21 in the EHI-only group, n=31 in the EHI-OP group and n=30 in the CAU group. Figure 1 provides an overview of the recruitment flow. "

13b) For each group, losses and exclusions after randomisation, together with reasons

Does your paper address CONSORT subitem 13b? (NOTE: Preferably, this is shown in a CONSORT flow diagram) *

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study.

See figure 1 flowchart of participants

13b-i) Attrition diagram

Strongly recommended: An attrition diagram (e.g., proportion of participants still logging in or using the intervention/comparator in each group plotted over time, similar to a survival curve) or other figures or tables demonstrating usage/dose/engagement.

Does your paper address subitem 13b-i?

Copy and paste relevant sections from the manuscript or cite the figure number if applicable (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study.

See figure 1, flow chart of participants

14a) Dates defining the periods of recruitment and follow-up
Does your paper address CONSORT subitem 14a? *

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

"Study participants were recruited from 21 Dutch organizations staffing >100 employees between December 2013 and December 2014."

14a-i) Indicate if critical "secular events" fell into the study period

Indicate if critical "secular events" fell into the study period, e.g., significant changes in Internet resources available or "changes in computer hardware or Internet delivery resources"

Does your paper address subitem 14a-i?

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

To our knowledge, no critical "secular events" fell into the study period

14b) Why the trial ended or was stopped (early)

Does your paper address CONSORT subitem 14b? *

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

We stopped recruiting once we did not receive new informed consent forms from employees from the participating organizations and the number of participants fulfilled our sample size criteria as calculated before the study.

15) A table showing baseline demographic and clinical characteristics for each group

NPT: When applicable, a description of care providers (case volume, qualification, expertise, etc.) and centers (volume) in each group
Does your paper address CONSORT subitem 15? *

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study.

See table 1 characteristics of analyzed participants

15-i) Report demographics associated with digital divide issues

In ehealth trials it is particularly important to report demographics associated with digital divide issues, such as age, education, gender, social-economic status, computer/Internet/ehealth literacy of the participants, if known.

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Does your paper address subitem 15-i? *

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study.

Table 1, characteristics of analyzed participants. We did not assess the amount of digital literacy. However, participants were excluded when they consented to participation but didn’t manage to finish the baseline questionnaire (possibly not having started), resulting in participants with some amount of digital literacy.

16) For each group, number of participants (denominator) included in each analysis and whether the analysis was by original assigned groups

16-i) Report multiple “denominators” and provide definitions

Report multiple “denominators” and provide definitions: Report N’s (and effect sizes) “across a range of study participation [and use] thresholds” [1], e.g., N exposed, N consented, N used more than x times, N used more than y weeks, N participants “used” the intervention/comparator at specific pre-defined time points of interest (in absolute and relative numbers per group). Always clearly define “use” of the intervention.

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Does your paper address subitem 16-i? *

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study.

See figure 1, flow chart. Also included in tables 2 and 3 on results.

16-ii) Primary analysis should be intent-to-treat

Primary analysis should be intent-to-treat, secondary analyses could include comparing only "users", with the appropriate caveats that this is no longer a randomized sample (see 18-i).

|   | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| subitem not at all important |   |   |   |   |   |
| essential                      |   |   |   |   |   |

Does your paper address subitem 16-ii?

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study.

table 2 shows the results for the intention-to-treat analysis on all primary and secondary outcomes

17a) For each primary and secondary outcome, results for each group, and the estimated effect size and its precision (such as 95% confidence interval)

Does your paper address CONSORT subitem 17a? *

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study.

Table 2. Results of three study arms
17a-i) Presentation of process outcomes such as metrics of use and intensity of use

In addition to primary/secondary (clinical) outcomes, the presentation of process outcomes such as metrics of use and intensity of use (dose, exposure) and their operational definitions is critical. This does not only refer to metrics of attrition (13-b) (often a binary variable), but also to more continuous exposure metrics such as "average session length". These must be accompanied by a technical description how a metric like a "session" is defined (e.g., timeout after idle time) [1] (report under item 6a).

Does your paper address subitem 17a-i?

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study.

See table 4

17b) For binary outcomes, presentation of both absolute and relative effect sizes is recommended

Does your paper address CONSORT subitem 17b? *

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study.

No binary outcomes were used in this study

18) Results of any other analyses performed, including subgroup analyses and adjusted analyses, distinguishing pre-specified from exploratory
Does your paper address CONSORT subitem 18? *

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study.

See table 3. Table 3 shows the results for the "combined intervention groups versus control group" as they both received the same e-health intervention and very few participants received a consultation with the occupational physician as intended in the second intervention group.

18-i) Subgroup analysis of comparing only users

A subgroup analysis of comparing only users is not uncommon in e-health trials, but if done, it must be stressed that this is a self-selected sample and no longer an unbiased sample from a randomized trial (see 16-iii).

Does your paper address subitem 18-i?

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study.

We performed no subgroup analysis.

19) All important harms or unintended effects in each group

(for specific guidance see CONSORT for harms)

Does your paper address CONSORT subitem 19? *

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study.

"Two reorganizing organizations withdrew from the study after receiving negative reactions from their employees "
19-i) Include privacy breaches, technical problems
Include privacy breaches, technical problems. This does not only include physical "harm" to participants, but also incidents such as perceived or real privacy breaches [1], technical problems, and other unexpected/unintended incidents. "Unintended effects" also includes unintended positive effects [2].

subitem not at all important 〇 〇 〇 〇 〇 essential

Does your paper address subitem 19-i?
Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

To our knowledge, there were no privacy breaches or technical problems

19-ii) Include qualitative feedback from participants or observations from staff/researchers
Include qualitative feedback from participants or observations from staff/researchers, if available, on strengths and shortcomings of the application, especially if they point to unintended/unexpected effects or uses. This includes (if available) reasons for why people did or did not use the application as intended by the developers.

subitem not at all important 〇 〇 〇 〇 〇 essential

Does your paper address subitem 19-ii?
Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

"All participants who had visited the OP were satisfied with the consultation."
No qualitative feedback from participants or observations from staff/researchers on strengths and shortcomings of the application was available

DISCUSSION
22) Interpretation consistent with results, balancing benefits and harms, and considering other relevant evidence

NPT: In addition, take into account the choice of the comparator, lack of or partial blinding, and unequal expertise of care providers or centers in each group

22-i) Restate study questions and summarize the answers suggested by the data, starting with primary outcomes and process outcomes (use)

Restate study questions and summarize the answers suggested by the data, starting with primary outcomes and process outcomes (use).

|   | 1   | 2   | 3   | 4   | 5   |
|---|-----|-----|-----|-----|-----|
| subitem not at all important |   |   |   |   | ●  |

Does your paper address subitem 22-i? *

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study.

"The primary aim of this study was to evaluate the effectiveness of the EHI tool without OP consultation (EHI-only) or with OP consultation (EHI-OP) on SA frequency among employees with frequent SA compared to CAU. The secondary aim was to evaluate the effectiveness of the interventions (EHI groups) on the total number of SA days, burn out, engagement and work ability. There was no significant difference in SA frequency during follow-up between the EHI groups and the CAU group. SA frequency was lower at T1 compared to T0 for all groups. We also found no significant difference on total SA, burn out and engagement at T1 between the EHI groups and CAU group. Work ability was lower in the EHI-OP study arm than in the CAU group at 1-year follow-up in the 'analysis of three study arms, but not in the analysis comparing the combined intervention groups versus the control group'."

22-ii) Highlight unanswered new questions, suggest future research

Highlight unanswered new questions, suggest future research.

|   | 1   | 2   | 3   | 4   | 5   |
|---|-----|-----|-----|-----|-----|
| subitem not at all important |   |   | ●  |   |   |

...
Does your paper address subitem 22-ii?
Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

"Future research should test the effect of blended care, possibly involving the employer or manager of the employee with frequent SA to encourage adherence to an OP consultation. This could help to increase awareness and sense of urgency, and may lead to more focus and adequate (local professional) and appropriate support."

"Future intervention studies on frequent absentees should deal with possible selection bias towards participants with more severe conditions by e.g. stratifying into groups with and without chronic disease or with and without long-term SA at baseline."

Additionally we have added a chapter on learnings and implications for future research on issues relevant for future research on frequent sickness absence

20) Trial limitations, addressing sources of potential bias, imprecision, and, if relevant, multiplicity of analyses

20-i) Typical limitations in ehealth trials
Typical limitations in ehealth trials: Participants in ehealth trials are rarely blinded. Ehealth trials often look at a multiplicity of outcomes, increasing risk for a Type I error. Discuss biases due to non-use of the intervention/usability issues, biases through informed consent procedures, unexpected events.

|   | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| subitem not at all important | | | | * | |

Does your paper address subitem 20-i? *
Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

See subhead "strengths and limitations"
21) Generalisability (external validity, applicability) of the trial findings

NPT: External validity of the trial findings according to the intervention, comparators, patients, and care providers or centers involved in the trial

| Subitem | 1 | 2 | 3 | 4 | 5 |
|---------|---|---|---|---|---|
| Not at all important | | | ☐ | | | Essential |

Does your paper address subitem 21-i?

Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study.

"The present study was undertaken in the Netherlands, limiting cross-country generalizability."
"The low participation rate may have affected the generalizability of the results."
"A higher participation rate combined with a larger source population may improve generalizability,"

21-ii) Discuss if there were elements in the RCT that would be different in a routine application setting

Discuss if there were elements in the RCT that would be different in a routine application setting (e.g., prompts/reminders, more human involvement, training sessions or other co-interventions) and what impact the omission of these elements could have on use, adoption, or outcomes if the intervention is applied outside of a RCT setting.

| Subitem | 1 | 2 | 3 | 4 | 5 |
|---------|---|---|---|---|---|
| Not at all important | | | ☐ | | | Essential |
Does your paper address subitem 21-ii?
Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study.

The intervention could be used as a stand-alone application in Dutch occupational health and managerial practice practice. In some organizations, employees with frequent sickness absence are stimulated by their employer to undertake action to prevent future sickness absence. Such stimulation would increase participation and adherence to the intervention (e-health intervention and consultation with occupational physician). However, this stimulation is not acceptable in a research setting in which voluntariness to participate and withdraw is important.

OTHER INFORMATION

23) Registration number and name of trial registry

Does your paper address CONSORT subitem 23? *
Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study.

"Netherlands Trial Register NTR4316;
http://www.trialregister.nl/trialreg/admin/rctview.asp?TC=4316"

24) Where the full trial protocol can be accessed, if available

Does your paper address CONSORT subitem 24? *
Cite a Multimedia Appendix, other reference, or copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study.

The full trial protocol is available from the authors.

25) Sources of funding and other support (such as supply of drugs), role of funders
Does your paper address CONSORT subitem 25? *
Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

"The authors would like to thank ArboNed for investing in the intervention as proposed. The authors would also like to thank Byelex, the software provider, who made the application to specification and enabled running the intervention. The authors AN, WvR and CR worked for ArboNed. The authors have no support or funding to report, apart from the investment by ArboNed in the intervention. ArboNed had no influence on the design, analysis, results or presentation of the study results."

X27) Conflicts of Interest (not a CONSORT item)

X27-i) State the relation of the study team towards the system being evaluated
In addition to the usual declaration of interests (financial or otherwise), also state the relation of the study team towards the system being evaluated, i.e., state if the authors/evaluators are distinct from or identical with the developers/sponsors of the intervention.

| subitem not at all important | 1 | 2 | 3 | 4 | 5 | essential |
|------------------------------|---|---|---|---|---|-----------|

Does your paper address subitem X27-i?
Copy and paste relevant sections from the manuscript (include quotes in quotation marks "like this" to indicate direct quotes from your manuscript), or elaborate on this item by providing additional information not in the ms, or briefly explain why the item is not applicable/relevant for your study

"The authors would also like to thank Byelex, the software provider, who made the application to specification and enabled running the intervention. The authors AN, WvR and CR worked for ArboNed."

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As a result of using this checklist, did you make changes in your manuscript? *

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- no

What were the most important changes you made as a result of using this checklist?

A few words

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6 hours

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- Other:

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This would involve for example becoming involved in participating in a workshop and writing an "Explanation and Elaboration" document

- yes
- no
- Other:
Any other comments or questions on CONSORT EHEALTH

Your answer

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