

# Installation and Instructions MoodApp

This document provides with an overview of all the possible actions in the app with the help of screenshots. You can also watch the instruction video on <https://moodapp.ugent.be/video.mp4>. The minimum Android version for MoodApp is 7.0.

In summary, the aim of this app is to collect information about you throughout the day. Ideally, you submit your information **at least once per day in the app: before and/or after every physical activity, or at the end of the day**. Every day you submit, you receive a star. When you have collected 21 stars, you go to the last questionnaire and you can finish the study. The researcher will communicate the deadline date before which you would have to finish the study.

The specific incentive and its conditions (such as submitting every day for 21 days) are listed on the website (<https://moodapp.ugent.be/>) and you can only qualify for the incentive if you follow these.

You can request to receive an overview of the study when the study and results are finished by mailing [ine.coppens@ugent.be](mailto:ine.coppens@ugent.be). For other questions or remarks, feel free to also send an email.

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In order to answer your questions if you would have any, send your compensation to you or send the results of the study to you if you would be interested, we need to process your email address in function of the follow-up and assistance of the research. Should you decide to participate, your email address is in no way linked to the research data you submitted or will submit during the study in the app. We process your personal data only for this purpose based on your consent to handle your questions and requests in the best possible way and to communicate with you. This consent for email communication may be revoked at any time by reporting this to the main researcher via mail.

When you visit our website (<https://moodapp.ugent.be/> and all other subpages thereof), access logs of your IP address, browser information and time of visit are collected. The access logs are only accessible by the administrator of the website and are only used to verify the functionality and stability of the website. These data will only be kept for the duration of the study, will never be linked to any of your other personal data submitted in this study and will be deleted when the study is finished. We process your personal data for this purpose based on our legitimate interest to provide added security and prevent abuse for our website.

The submission of your subjective medical information in this app is not a substitute for medical or professional care, and you should not use the app in place of a visit, consultation or the advice of your physician or other healthcare provider. If you believe you have any health problems, or if you have any questions regarding your health or a medical condition, you should promptly consult your physician or other healthcare provider.

# 1. Installation

Open the website (<https://moodapp.ugent.be/#details>) with the download link to the app installation file (moodapp.apk) on your smartphone. Click on the link or copy the link and paste it in your browser. It is possible that the file is being downloaded already or that you have to click “Download” in the screen. Your browser or your smartphone might tell you that it cannot check this file for viruses or that the file might hurt your device, but if you select that you trust the file, it should give you the option to download it anyway.

It is possible that your phone doesn’t allow the .apk file to be downloaded and installed. In that case, go to your phone’s Settings

- Security and Privacy / Security / Biometrics and Security
- More Settings / Device administration (this step not on all devices)
- Install apps from external sources / Install unknown apps / Unknown source installations
- Select the browser (e.g. Chrome or Firefox) you want to download the APK files from
- Switch “Allow app installs” on.

Your phone might immediately ask you whether you want to install the app. If it does, click on “Install” (1c) and on some smartphones you have the option to select “Package Installer” to do this. If it doesn’t ask you to install the app, navigate to your File Explorer / File Manager app (1a) and you should see the folder Downloads and APKs. When you click on either of those folders, the installation file “moodapp.apk” should be there (1b). Click on this file, which should open a pop-up (1c). Click on “Install”. Now, the app should be installed and visible on your smartphone’s home screen (1d).

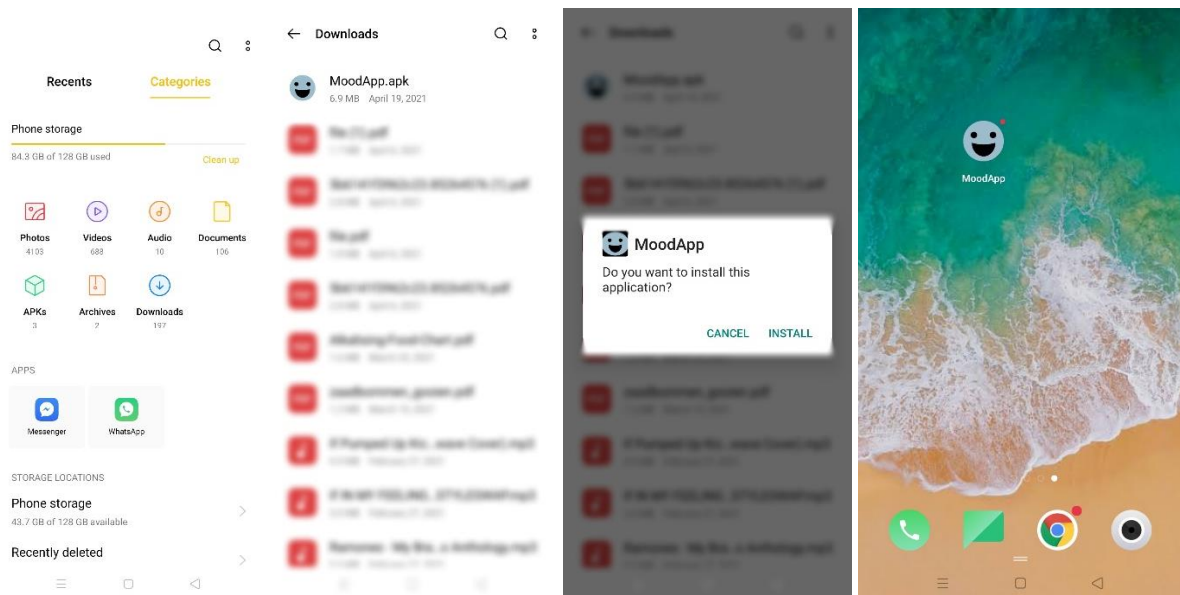


Figure 1: Installation of the app

(a)

(b)

(c)

(d)

Every Android smartphone is different so it is definitely possible that your phone needs to go through different steps. If the download and installation of the app does not work, contact Ine via [ine.coppens@ugent.be](mailto:ine.coppens@ugent.be).

## 2. Four legal documents: Terms of Use, Privacy Policy, Cookie Policy and Information and Consent Form

Open the newly installed app. You will see a screen containing the **Terms of Use**, similar like in (2a) but the text may differ. Sometimes you have to wait a few seconds before that screens shows, but if you don't see this screen at all, please contact Ine.

Read the Terms of Use by scrolling down the screen and agree by clicking "I agree" (2b). Click "Go to next step" (2b) and the next screens will show you the **Privacy Policy** and **Cookie Policy** that you have to read before you can go to the next step. The next screen shows you the **Information and Consent Form** and gives you the possibility to give your explicit consent to all the listed items. Read the list carefully and only when you want to give your explicit consent to all the items, you indicate this in the app and the app will grant you access to the rest of the study.

Unfortunately, when you don't agree to the Terms of Use, don't indicate you have read the Privacy and Cookie Policy and don't give your explicit consent to all the listed items, you cannot participate in this study and the app will not grant you access to the study.

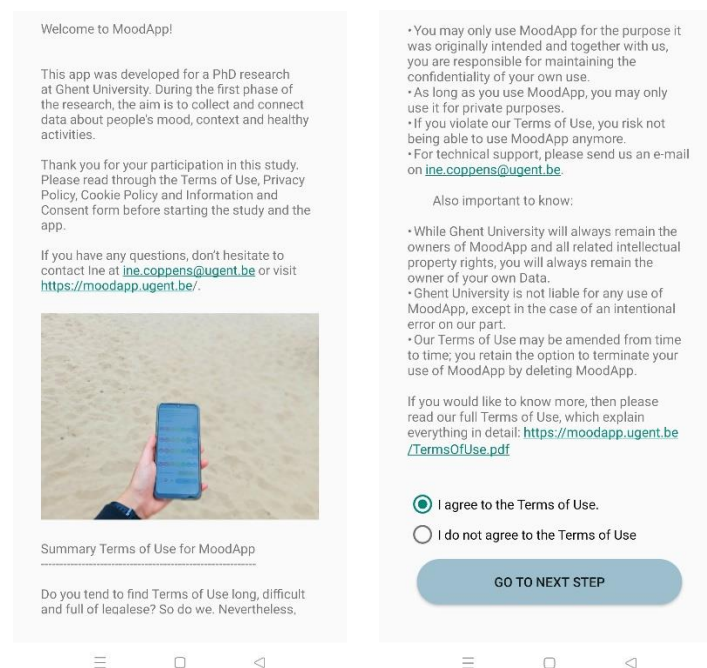


Figure 2: Terms of Use, Privacy Policy, Cookie Policy and Information and Consent Form  
(a) (b)

You can review these documents at any time through the app, as explained in Buttons at the bottom of the screen. If you would like to receive these or other documents of the study in pdf format, you can always check the website or contact the researchers.

### 3. Starting the study (1 pre-test questionnaire)

The next screen (3a) will ask you to provide some basic information about yourself. The screen after that (3b) shows a questionnaire where you can submit your answers using sliders. At the left and right of these sliders, you see the corresponding values at the extreme left and right of the slider. Move the slider to the value that applies to you by either dragging the circle or tapping the circle on your chosen value on the slider. The middle value means you answered neutral.

Submit the answers by clicking the blue button at the bottom of the screen after which a pop-up will appear that reminds you to check your answers because once submitted, they cannot be edited again (3c).<sup>1</sup>

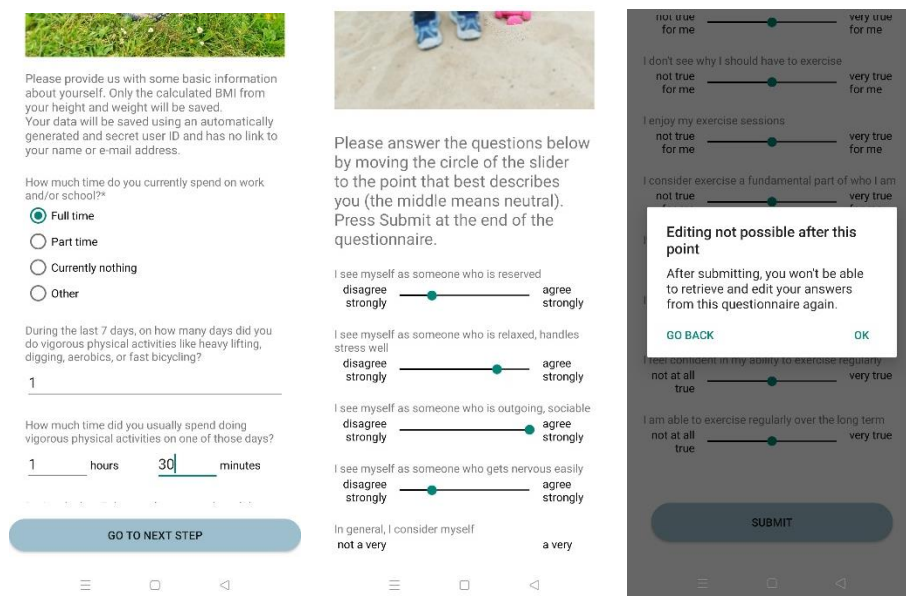


Figure 3: Pre-test questionnaire with sliders

(a)

(b)

(c)

<sup>1</sup> Please refer to the Information and Consent Form for more information: <https://moodapp.ugent.be/InformationConsentForm.pdf>. It is, however, possible to delete all your previously submitted data when you want to exercise your right to be forgotten. This document describes how to do this in the section: *Deleting data in the app.*

Click again on the blue button (4a) to go to the main screen of the app. When opening this for the first time, the app will ask you to allow the permissions for the step count and location collection<sup>2</sup> (4b). After this, you are all set up.

Thank you for answering the questions. You can click on the button at the bottom to go to the main screen of this app where you can allow the permissions for your location and step data.

Let's start!

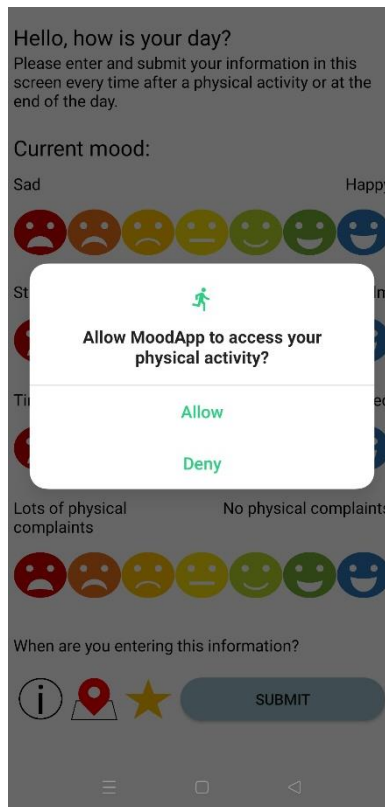


GO TO APP AND PERMISSIONS



Figure 4: Permissions

(a)



(b)

Depending on your Android software version, it is possible that the permission for your step data will not be asked or that collecting step data is not possible. You can check this in the app's info and if this is the case, you don't have to do anything about this.

<sup>2</sup> When you don't feel comfortable giving permission to your GPS or step count, you can always deny these permissions at this moment or later in your app's settings. The app will work without this information as well. However, the location information is important for the research and sufficient security measures were taken to protect your personal and sensitive information (encryption, pseudonymization, Data Processing Agreements, less accuracy for the location coordinates, the possibility to erase past location points etc.), as explained in the Privacy Policy and in the Information and Consent form that are available in the app and on the website.

## 4. Entering your daily information in the main screen (+/- 21 days)

From now on, when opening the app, you will automatically enter the main screen with the emojis (5a). Here you have four rows of emojis for happiness, stress level, energy level and amount of physical complaints. Each row contains seven emojis where you can select one by clicking on it. Please select your response by selecting one emoji for each row. The most left and right emojis have their corresponding value in text above them and the middle emoji means neutral.

When clicking on an emoji that is neutral or lower (the left side), a pop-up will show (5b) where you can provide some more information about why you experience those feelings<sup>3</sup>. Select all the feelings that apply to you or enter a new option by clicking “Enter a new option” and typing in your symptom.

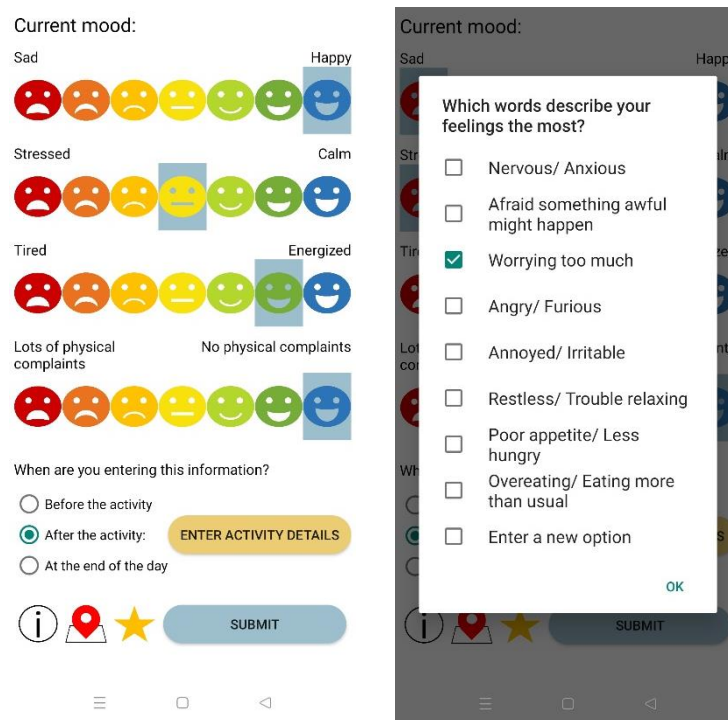


Figure 5: Entering your data (a)

(b)

To remind you, the app will send you notifications throughout the day, as explained in [Notifications \(3-7 times per day for the duration of the study\)](#).

<sup>3</sup> We respect your privacy and we won't do anything when you enter negative emotions or symptoms. Because the system was built to be compliant with the GDPR, the system does not know who you are when you enter the sensitive information and can therefore not do anything for you. Please consult help on your own initiative if you are dealing with negative feelings. Know that talking helps and that you can call 24/7 to Tele-onthaal Belgium on 106 or <https://www.tele-onthaal.be/> and to the suicide hotline on 1813 or <https://www.zelfmoord1813.be/>. Both organizations can also be reached via (anonymous) chat. The submission of your subjective medical information in this app is not a substitute for medical or professional care, and you should not use the app in place of a visit, call consultation or the advice of your physician or other healthcare provider. Ghent University is not liable or responsible for any advice, course of treatment, diagnosis or any other information, services or product for the subjective medical data you submitted in this app. If you believe you have any health problem, or if you have any questions regarding your health or a medical condition, you should promptly consult your physician or other healthcare provider. Never disregard medical or professional advice, or delay seeking it, because of something you entered in this app.

Select whether you are entering the information before or after the activity, or at the end of the day (5a). When you selected you are entering after the activity, you can enter the details of that activity (or multiple activities) by clicking on the orange button (5a). A pop-up (6a) will show where you can select several activities. For each selected activity, another pop-up (6b) will ask you for more details about that activity: the duration (scroll to select hours and minutes), the intensity and your motivation (select one value from the dropdown list), whether you performed it indoors or outdoors, whether you performed it alone or with a buddy and what the experienced difficulty was.

When your activity is not yet present in the initial list, you can click on “Enter a new option” and a pop-up (6c) will open where you can type your own activity. From now on, this activity will always be present in the activity list and you don’t have to type it again.

Note that the activity has to be a physical activity that raises your heart rate. Things like cleaning the house or working in the garden also raise your heart rate so can also be entered.

Because you can enter even the smallest activities like walking to the supermarket, it is very rare that you didn’t perform in any physical activity that day. But if you do have a lazy day, you can select this in the app as well (“at the end of the day = no activities performed today”).

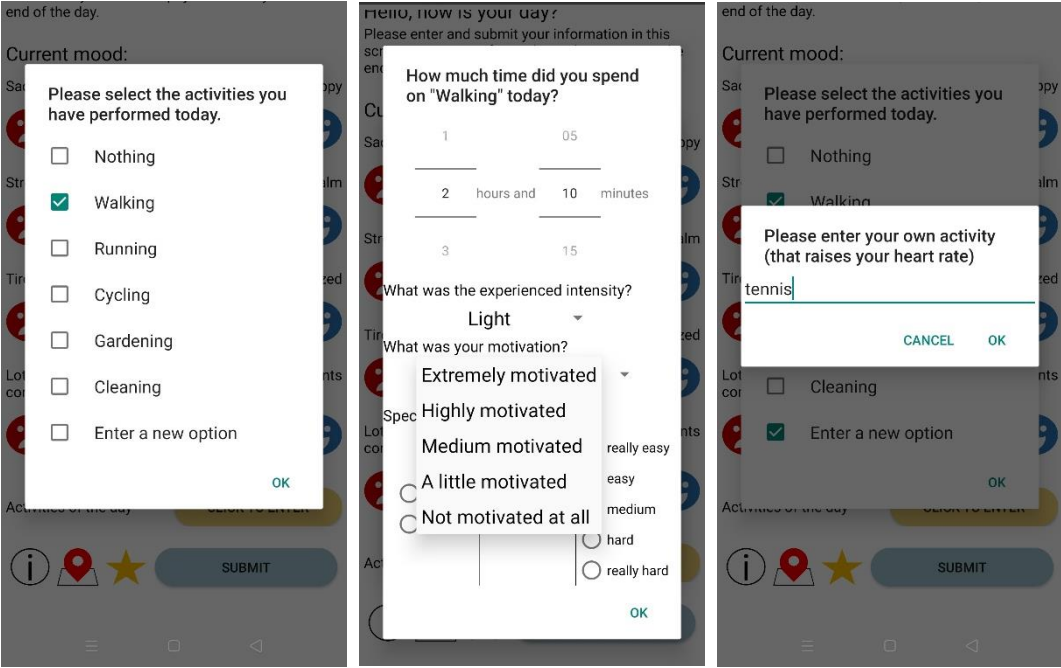


Figure 6: Entering your activities  
(a)

(b)

(c)

You can now press the blue “Submit” button at the bottom of the screen. Pressing this will show a pop-up (7) that asks if you want to review your collected previous location points since your last submit. When you click “Review data”, the app will send you to the Location history page, which is further explained in [Buttons at the bottom of the screen](#). When you click “Submit right away”, you submit the data without reviewing all the data<sup>4</sup>. You can also check the option “Don’t ask again” if you don’t want to see this pop-up anymore in the future.

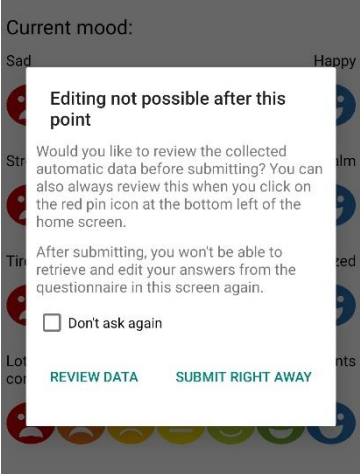


Figure 7: Pop-up when submitting data

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<sup>4</sup> Please refer to the Information and Consent Form for more information.



## 5. Notifications (3-7 times per day for the duration of the study)

You can submit information about your day multiple times per day. The app will send you notifications throughout the day to remind you to go to the app. The notification (8) shows the same 7 emojis as the ones in the main screen of the app.



Figure 8: The notification

When you receive a notification<sup>5</sup>, it will look like this (9). Select your overall mood at that time by clicking on one of the seven emojis. Clicking on the notification, will open the main page of the app where you can submit all your information, as explained before in *Entering your daily information in the main screen (+/- 21 days)*.

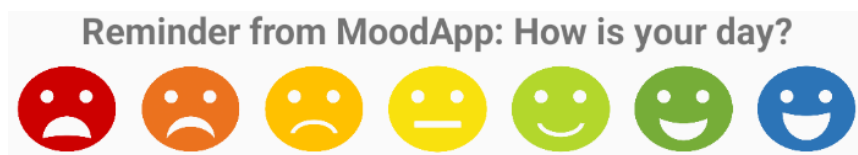


Figure 9: Select your mood emoji in the notification

Note that ideally, you should go **at least once a day** to the main page where you submit your information, either by clicking on the heart in the notification, or by opening the app yourself at any time of the day. Ideally, you **enter your activities immediately before AND after performing them**.

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<sup>5</sup> The app will send you 3 to 7 notifications per day, depending on how long ago you have submitted information in the app, between 10 am and 10 pm.

## 6. Buttons at the bottom of the screen

In the main screen of the app, to the left of the “Submit” button, you see these buttons: ⓘ 📍 ★

If you click on the red pin icon 📍, you go the Location history page as seen in (10a). This page gives you an overview of all your past location points on a map<sup>6</sup> (only with an accuracy of 100 meters so the red pins will not have the exact location on the map)<sup>7</sup>. These were the points that were collected between your previous submit and the current time<sup>8</sup>. When you navigate in the map and click on the red pins that represent your location history, you see more details about that location point (which time, for how long and the possibility to delete that specific location point) in a pop-up (10b). This is also the screen where you can choose to delete data, as explained in *Deleting data in the app*. Go back to the previous or to the main screen by pressing the green “Back” button.

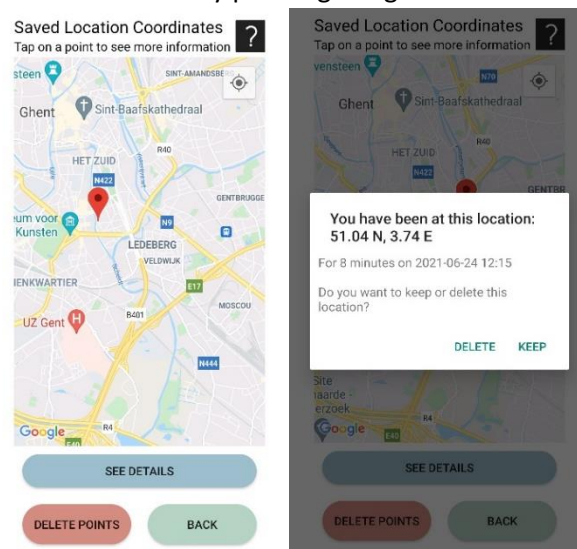


Figure 10: Location history page (a)

(b)

If you click on the star icon ★ in the main screen, you go to the overview of your collected stars and progress as seen in (11a). Every day you submit at least once, you collect 1 star. In this screen, you can see how many stars you have already collected. When you collected 21 stars (+/- 3 weeks), the app will let you know that you can finish the study, as explained in *Finishing the study (1 post-test questionnaire at the end)*.

The main screen also has this information button ⓘ that allows you to navigate to the Information page (11b). Here you can select different texts that you might want to read: the Terms of Use, Privacy Policy, Cookie Policy and Information and Consent Form that you read when first opening the

<sup>6</sup> It is possible that your smartphone is not able to show the map. You can always review the same location points history when you click “See Details”, together with the collected step data. To show this map, the app uses the Google Maps API (<https://developers.google.com/maps>). More information about the Google Maps API can be found in the app’s Cookie Policy: <https://moodapp.ugent.be/CookiePolicy.pdf>.

<sup>7</sup> Because location points are only saved with three decimals to protect your privacy. Please refer to the Information and Consent Form for more information: <https://moodapp.ugent.be/InformationConsentForm.pdf>

<sup>8</sup> During the night, the app will also collect location data and if you want, you can turn off your internet at night or set your phone on airplane mode which stops the location collection during that time.

app, information about the ethical approval of this study, contact information and links to help sources.

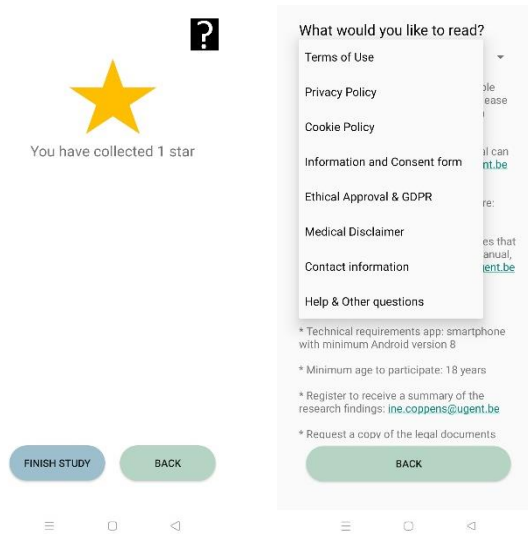



Figure 11: Star page and Information page

(a)

(b)

Some screens have this question mark icon  in the right upper corner. When you click this, a pop-up with more information about that page and about the data collection will be shown (12).

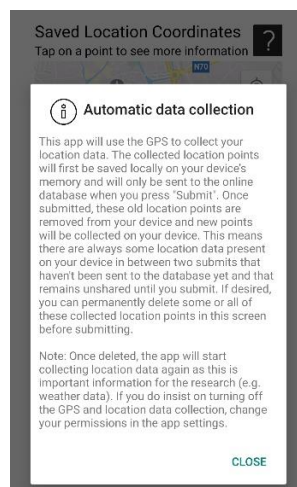



Figure 12: Question marks in the app

## 7. Deleting data in the app

When clicking on the red pin icon  and going to the Location history page, you have the possibility to delete the automatically collected data since your previous submit. You can navigate in the map (13a) and click on individual location points, indicated as the red pins on the map, and delete or keep them (13b). When you click on the red “Delete points” button, you delete all the location points between your last submit and the current time.

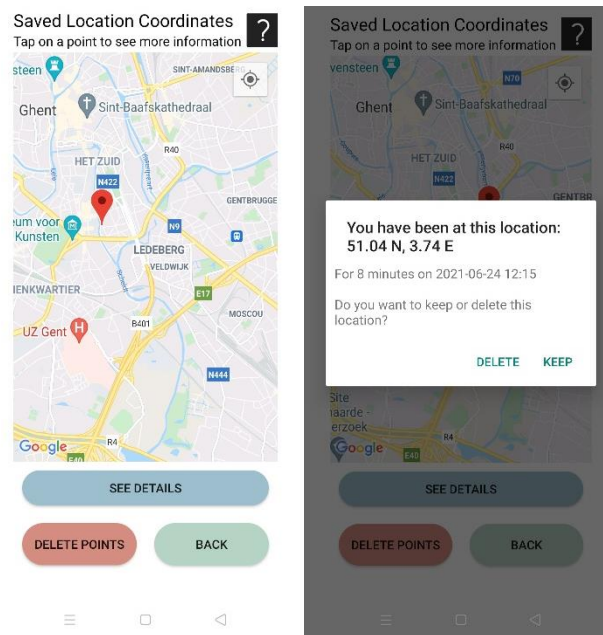


Figure 13: Deleting data in the Location history page

(a)

(b)

You can also click on “See details” to see the location points in a list (14a). Here you can click on “Delete options” which gives you two options in a pop-up (14b):

- Delete all the automatically collected data since your previous submit (this includes location data but also step data, weather data and location type data).

For this option, choose “Since previous submit”

- Completely stop the study, withdraw your consent and delete ALL your previously submitted data in the online database. **This means you stop the study at that moment and all your previous data will be deleted.**

For this option, choose “ALL” after which you will have to confirm this decision in a new pop-up (14c). To prevent people from accidentally deleting their data, you have to confirm this decision by typing “yes”.

After this, you have to delete the app from your device to prevent further data collection, as explained in *Finishing the study (1 post-test questionnaire at the end)*. You don’t have to notify the researchers about this decision.

This will be your option when you want to execute your “right to be forgotten”. Don’t forget that when you want to perform this action, you have to do this when the app is still installed on your device.<sup>9</sup> You cannot do this anymore after you have deleted the app from your device. Only do this when you are certain you want to erase all your data.

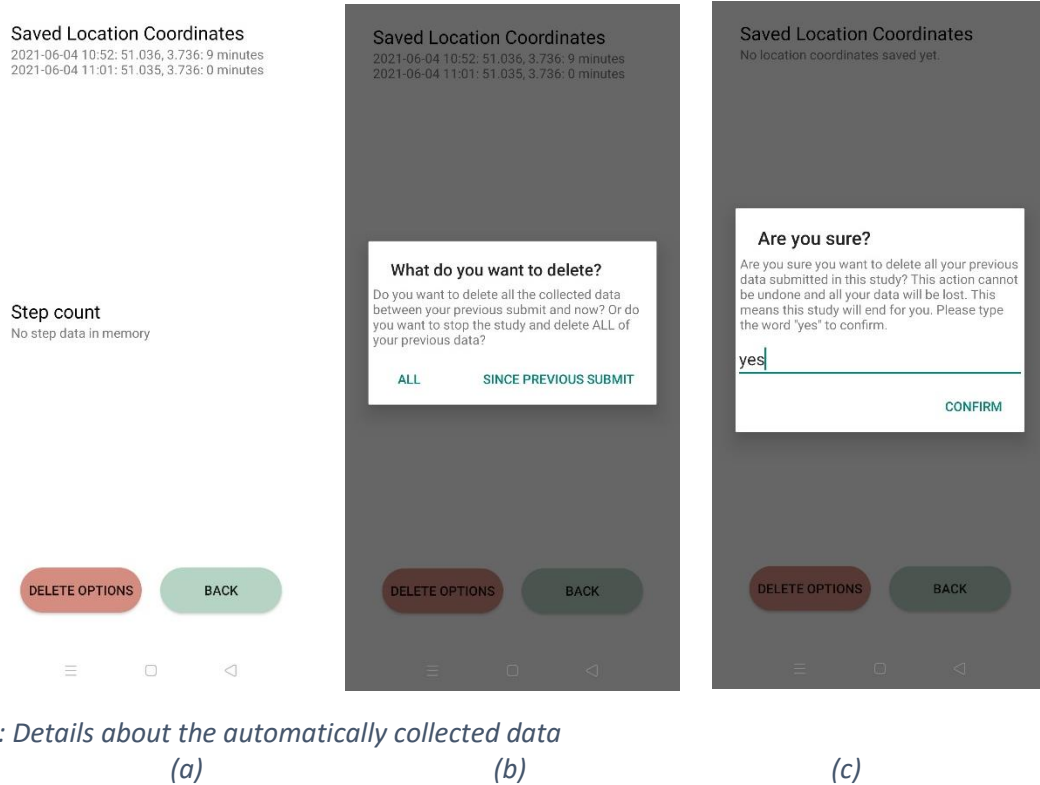



Figure 14: Details about the automatically collected data  
(a) (b) (c)

<sup>9</sup> It is really important that if you want to exercise your right to be forgotten, you have to follow the steps explained here BEFORE uninstalling the app from your device and before the deadline date communicated on the website. This will stop the study immediately. Please refer to the Information and Consent Form for more information: <https://moodapp.ugent.be/InformationConsentForm.pdf>.

## 8. Finishing the study (1 post-test questionnaire at the end)

When you collected 21 stars (+/- 3 weeks), the app will notify you that you can finish the study. You can either click on the link in the pop-up or click on the star icon  in the main page and click on “Finish study” (15a). This will first lead you to the last questionnaire of this study (15b). Please fill in your answers and press the blue “Submit” button at the bottom of the screen and confirm that you are sure about your answers (15c). At this moment, the study is over and you can remove the app from your device. You can also first check out your mood graph in the next screen (15d). This will show a graph in function of the time and on each day your average mood score of that day and the corresponding activities you performed. Navigate and click on a point in the graph to show the information of that point.<sup>10</sup>

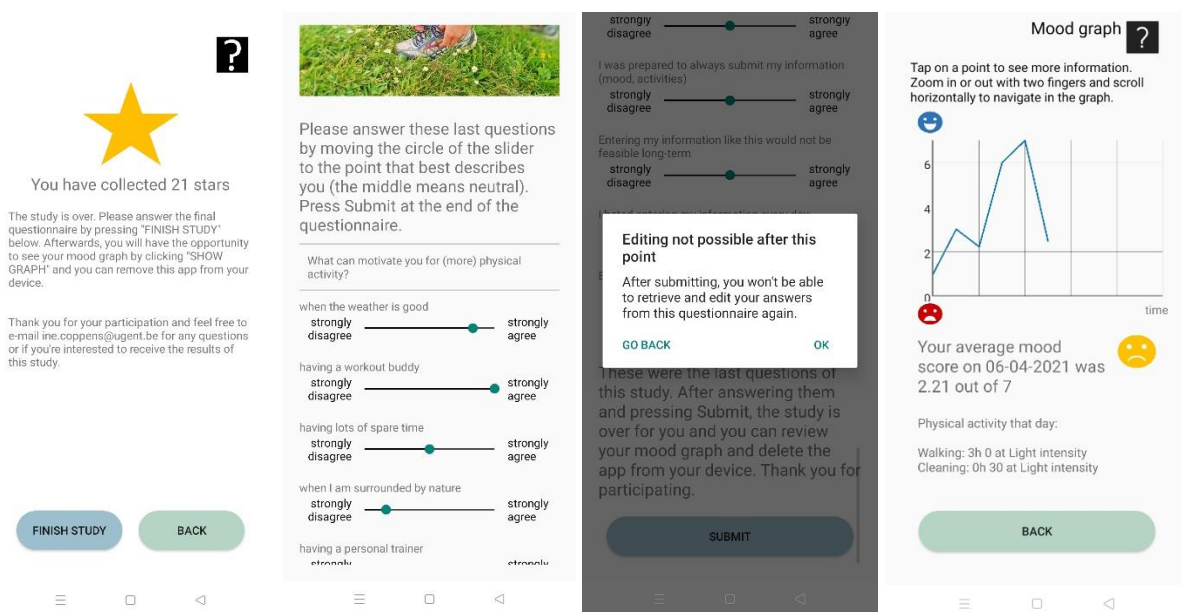


Figure 15: Finishing the study

(a)

(b)

(c)

(d)

If the 21 days are not over yet and you decide to finish this study earlier, you can do this by navigating to the Stars page (16a) and clicking “Finish early” (16b). This will also automatically lead you to the page where you fill in the last questionnaire. After this, you can also see your mood graph.

<sup>10</sup> This graph is only generated to show you at the end of the study. You don't have to do anything with it and you can just observe your past data. In order for the app to show this graph, the data needed for it was saved locally on your device. This means that you can permanently delete the data by deleting the app at the end of the study.

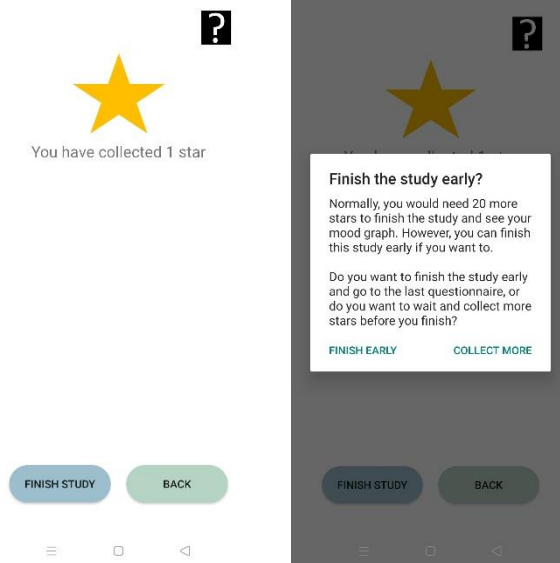


Figure 16: Early finish of the study (a) (b)

After you finished the last questionnaire, the study is finished for you and you won't be able to enter more information. You can delete the app from your device now by going to the app info (17a) and pressing "Uninstall" (17b) which will stop further data collection and notifications. Remember, if you want to execute your right to be forgotten, do this in the app BEFORE uninstalling the app. This will not be possible anymore once you have deleted the app from your device.

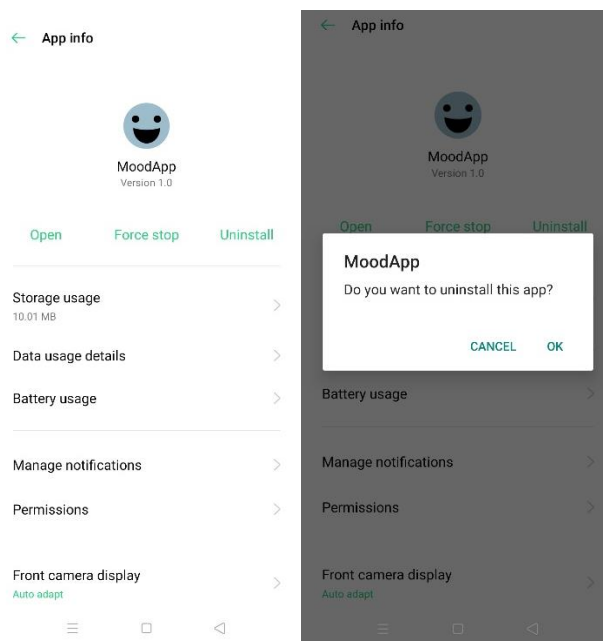


Figure 17: Uninstall the app from your device (a) (b)

**Thank you participating and trying out MoodApp! Don't hesitate to ask questions:**  
[ine.coppens@ugent.be](mailto:ine.coppens@ugent.be)