Data donation of personal physical activity trackers

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Abstract

Physical inactivity is a growing worldwide concern. Population monitoring of physical activity (PA) is generally done using questionnaires, yet recently there has been a strong interest in more objective forms of measurement using wearable activity trackers. Depending on the prevalence of personal activity trackers, respondents could be invited to share the data from their own devices. Adherence to PA guidelines could then be determined with the help of the donated data. In this study, we explored two different methods of data donation to measure PA: uploading of spreadsheets and manual copying of data into questionnaires. Next to the response and representativeness of those willing to donate, we compared the substantive outcomes of the different methods to assess PA. The results showed that prevalence of personal activity tracker is still limited and biased with age, education and adherence to the PA guidelines. The majority of respondents were willing to copy their data in a questionnaire, whereas uploading a spreadsheet proved to be very difficult. Future research should focus on assessing differences between brands and finding alternatives to measure PA amongst the population without a personal tracker.

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The views expressed in this report are those of the authors and do not necessarily correspond to the policies of Statistics Netherlands.

Introduction

Physical inactivity, in particular sedentary behavior, is a growing concern in many countries (World Health Organization, 2014). Over the last decade, the time that people daily spent doing moderate-to-vigorous physical activity has decreased, while the prevalence of obesity has increased (Lee et al. 2012; Kohl et al. 2012; Guthold et al. 2018). Insight in a populations' physical activity (PA) levels is needed to inform governments and policy makers. Questionnaires, currently the predominant form of PA measurement, are known to suffer from measurement error due to recall bias, telescoping and social desirability (Adams, 2005; Ferrari, Friedenreich, & Matthews 2007; Fruin & Rankin 2004; Helmerhorst et al. 2012; Sallis & Saelens 2000; Shephard 2003; Welk et al. 2007; Wijndaele et al. 2015). These disadvantages can potentially be overcome by using activity trackers to measure PA.

Activity trackers are designed to measure motion and derived features such as step count and active minutes (Ward et al. 2005). Trackers vary strongly in accuracy, usage and costs. To measure PA amongst the population objectively, one could distribute either commercial or research-grade activity trackers amongst willing respondents. Yet, this would require intensive logistics and comes with high costs (de Wolf et al. 2024). An alternative approach would be to rely on personal activity trackers owned by respondents, especially since more and more people have a device that measures their PA. The term 'data donation' refers to the use of data that respondents (passively) collect themselves (e.g., through wearables) or that is being collected from them by third parties (e.g., companies logging digital trace data from social media platforms) in their daily lives. For this method, respondents should extract the data from their devices or request it from these third parties and subsequently share the data with researchers. Respondents can be asked to share the data that was gathered over the past period, overcoming the challenges of a questionnaire while still building on retrospective data.

Prior research in this area has investigated the (hypothetical) willingness to donate data on a small scale (Toepoel, Luiten & Zandvliet, 2021 and Kraakman et al. 2023). Half of the respondents owned a tracker in these studies, and willingness to donate data differed greatly per task. Data for 1 day was copied by 86% of the respondents, but hypothetical willingness for copying data of 1 week was only 53%, and for uploading a spreadsheet only 38%. The small pilot described in Kraakman et al. (2023) showed that dependent on the indicator only very few respondents copied useful data over 1 week (ranging between 7 to 25 respondents, of the 26 respondents who participated in this study). In the current study, actual donation of data is examined at a larger scale, and rather than solely asking respondents to manually copy their data into the questionnaire, respondents were also asked to extract a spreadsheet from their device and upload it in the questionnaire. The donated data are various activity indicators per day provided by respondents' personal activity trackers.

In this paper, we further extent the research area of data donation of PA data by exploring the promise of two different methods of data donation to measure PA: uploading of spreadsheets and manual copying of data into questionnaires to study how many and which respondents can and actually want to provide data using each of these methods. Next to the response and representativeness of willingness to donate, we compare the substantive outcomes of these different methods to the Dutch PA questionnaire to assess to what extent survey data and personal tracker data match.

Method

The data used in this article was gathered within a larger research project about measurement of PA (see Appendix A for description of this project). All data was gathered amongst participants of a Dutch probability-based panel (LISS panel; more information in Appendix B). The data collection procedures were approved by the Internal Review Board of Centerdata. Informed consent was obtained from all respondents digitally.

Study design

In October 2021, a pre questionnaire was fielded to 3874 panel members, of which 3370 responded (Figure 1). In addition to questions on PA, respondents were invited to participate in a PA study where they would wear a research-grade activity tracker (ActivPAL) for a week. Based on the indication of willingness to wear a research-grade device (and availability of the devices), 615 of the 3370 pre-questionnaire respondents were invited to actually wear the ActivPAL for 8 days in the first months of 2022, of which 503 respondents finally did so.

In July 2022, a post questionnaire was fielded to 3628 panel members that had been invited to the pre questionnaire and were still active panel members. This questionnaire contained the same PA questions as used in the pre questionnaire. Of the 2929 respondents to this questionnaire, 626 owned a personal activity tracker and were asked to donate their data by manually entering the activity indicators of the prior day from their device into the questionnaire.

In August 2022, an additional evaluation questionnaire was fielded to all respondents who wore the ActivPAL. Of the 503 participants in the ActivPAL study, 221 indicated to have worn a personal activity tracker during the study's fieldwork. They were asked to manually report PA indicators from their device into the survey for the same week they wore the ActivPAL. Of these 221 respondents with a personal tracker, 61 owned a Fitbit, and were additionally asked to export the PA spreadsheet file from their device from the same week they wore the ActivPAL, and to donate this file by uploading it within the survey.

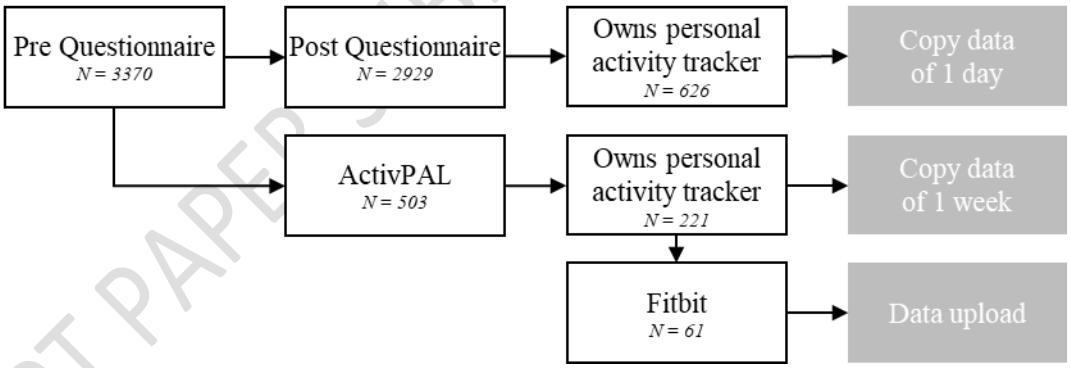

Figure 1. Overview of study design showing the response in the various study elements

Donating a spreadsheet versus manual copying

To ensure a successful data donation process, detailed instructions had to be developed for each brand. Extensive manuals containing step-by-step screenshots were developed for the most popular brands[1] (Apple, Garmin, Samsung and Fitbit) for copying the data. However, during the development of the instructions for the spreadsheets, it became evident that for three of the four brands it would become too technically challenging for the majority of participants to successfully export these files.

[1] There were 7 respondents who wore a personal tracker that was not of Apple, Garmin, Samsung or Fitbit

For Fitbit users, instructions were relatively straightforward, thus we focused on Fitbit for exporting and donating the spreadsheet files (see Appendix C for screenshots of the instructions).

Measures

Median active minutes (per week/day) per source

In the post questionnaire, all 626 respondents who owned a personal activity tracker were asked to copy several activity indicators describing their activity on the prior day (the ones available for most brands): number of steps, total distance travelled, number of active minutes, number of calories burned, average heart rate and time asleep (see Appendix C). Respondents could also indicate that they did not want to copy the data. The total number of active minutes per week was calculated by multiplying the daily minutes by seven.

All respondents who wore an ActivPAL and a personal activity tracker during the study (n = 221), were asked to copy the indicators named above for the entire week that they wore the ActivPAL to allow comparison between the two devices. In the evaluation questionnaire, respondents were first asked about their willingness to donate data. If they were willing, they were subsequently forwarded to a screen to enter the values per day (see Appendix C). The total number of minutes per week was calculated by summing the number of active minutes per day.

Additionally, the 61 respondents who wore the ActivPAL and owned a Fitbit were asked in the evaluation questionnaire whether they were willing to upload a spreadsheet with all their data from the week that they wore the ActivPAL. Willing and doubting respondents were provided with an instruction to download the data from their Fitbit and upload the spreadsheet in the questionnaire (Appendix C). Fitbit differentiates between minutes sedentary, slightly active, fairly active and very active. For calculating the number of active minutes, the fairly and very active minutes were summed. If respondents uploaded more or less than one week, the total number of active minutes was extrapolated to one week.

Adherence to PA guidelines

The pre questionnaire consisted of the Dutch PA questionnaire, the Short Questionnaire to Assess Health Enhancing Physical Activity (SQUASH; Wendel-Vos & Schuit, 2002) and several questions on sedentary behavior (National Institute for Public Health and the Environment, 2020). Furthermore, respondents were asked about their willingness to donate data and to wear a research-grade device, followed by questions about privacy, technology and general health.

To meet the Dutch PA guidelines, respondents have to engage in at least 150 minutes of moderate to high intensity PA per week and do muscle strengthening activities at least twice a week (RIVM, 2020). Here, we only report adherence to the first aspect as the trackers only assess PA intensity and cannot assess whether muscle strengthening activities were performed. The standardized methods developed by the Dutch National Institute for Public Health and the Environment to compute these parameters were used (Wendel-Vos et al., 2020).

Based on the number of active minutes per week, the adherence to the PA guidelines according to the donated data was assessed as well.

Analysis

For the response and representativeness analyses, all respondents who copied or uploaded any data (file) were included. Using logistic regression models, we examined selectivity in ownership of personal activity trackers within pre questionnaire respondents and selectivity in donating data conditional on tracker ownership.

Concerning the analysis of the target variable *Adherence to PA guidelines* outliers were identified and respondents were excluded when they had not provided data on the number of active minutes. For copying data of 1 day, only 313 respondents (61.7%) could be included as not all devices provided the number of active minutes per week. In addition, nine outliers were removed using the Interquartile Range (IQR) method of outlier detection, resulting in 304 (60.0%) respondents in this analysis. For copying data of 1 week, 99 respondents provided the number of active minutes (63.9%) and seven outliers were excluded using the IQR method of outlier detection, resulting in 92 (59.4%) included respondents. For uploading Fitbit data, no outliers were identified due to the small sample size, yet 3 respondents uploaded an empty file and were thus removed, leading to 31 respondents (50.8%) in the analysis.

Based on these reduced datasets, the number of active minutes per week and day were calculated. Subsequently, the adherence to PA guidelines according to the different data donation sources and the SQUASH was determined and compared.

Results

Response

In the post questionnaire, 507 respondents copied data of one day (Table 1). Out of the 221 respondents who wore an ActivPAL and a personal activity tracker, 151 respondents reported they were willing to copy one week of data, 18 respondents were in doubt and 52 respondents said 'No'. From the willing and doubting respondents, 155 copied data of one week. However, only 38 respondents completed all requested activity indicators. This can (partly) be explained by the fact that not all activity trackers measure all requested activity indicators.

Of the 61 respondents who wore an ActivPAL and a Fitbit, 43 respondents said 'Yes', 2 respondents were in doubt and 16 respondents refused to donate data. Of the willing and doubting respondents, thirty-four respondents uploaded a file.

Table 1. *Response per fieldwork phase*

Response step	n	% of respondents in previous step
Invited to pre questionnaire	3874	100
Responded to pre questionnaire	3370	87.0
Invited to wear ActivPAL	615	18.2
Wore ActivPAL	503	81.8
Wore personal activity tracker in week of ActivPAL	221	44.9
Copied data (a week)	155	70.1
Wore Fitbit in week of ActivPAL	61	27.6
Uploaded data	34	55.7
Invited to post questionnaire	3628	100
Responded to post questionnaire	2929	80.7
Owner of personal tracker[a]	626	21.4
Copied data (one day)	507	81.0

[a] A smartwatch, activity (fitness) tracker that measures PA.

Representativitveness

Table 2 shows the results of the conditional logistic regression models used to test the difference in demographic characteristics between respondents who donated data and the respondents who could but did not copy/upload data (see Appendix D for the demographic composition of the groups). Compared to all respondents of the post questionnaire, younger and higher educated respondents are overrepresented amongst respondents owning a device. Moreover, respondents with a personal tracker also more likely to adhere to the PA guidelines. The additional bias for copying one day of data is limited to higher educated respondents being more likely to donate this type of data. Regarding copying one week of data (either by copying or by uploading) age is an important factor. Amongst respondents with a tracker, the younger respondents are more likely to share one week worth of data. Remarkably, for uploading Fitbit data, respondents adhering to the guidelines according to the SQUASH are less likely to upload. However, the small sample size of this group may have caused this result.

Table 2. *Logistic regression models predicting data donation for personal device ownership and each data donation method.*

	Owning a personal tracker (n=2542[a])		Copy data – 1 day (n=550[a])		Copy data – 1 week (n=210[a])		Upload data (n=59[a])	
	Estimate	s.e.	Estimate	s.e.	Estimate	s.e.	Estimate	s.e.

Intercept	-1.69***	0.25	0.55	0.54	2.33**	0.87	0.95	2.20
Age: (ref = 18 - 34 years)								
35 - 49	-0.05	0.15	-0.11	0.30	-1.43**	0.53	-2.70*	1.31
50 - 65	-0.54***	0.14	0.17	0.31	-1.25*	0.51	-2.10	1.18
65+	-1.20***	0.15	0.72	0.37	-1.62**	0.58	-3.66**	1.33
Gender: (ref = male)								
Female	0.10	0.10	0.20	0.23	-0.10	0.33	0.67	0.82
Educational level: (ref = low)								
Middle	0.45**	0.16	0.40	0.34	-0.24	0.48	0.99	1.15
High	0.80***	0.15	0.66*	0.33	0.21	0.47	1.75	1.09
Adherence to PA guidelines: (ref = not adhering)								
Adhering	0.43***	0.11	0.06	0.24	-0.21	0.34	-1.56*	0.03
Nagelkerke's R	**0.284**		**0.248**		**0.204**		**0.471**	

Note: * p < .05, ** p < .01, *** p < .001. Logistic regression models explain participation, 1 = yes.

[a]The sample size for each analysis is reduced compared to the numbers in Table 1 due to missing values in the variable **Adherence to PA guidelines** that is based on the SQUASH.

Adherence to PA guidelines

Respondents were very active according to their own personal trackers. According these devices, the majority of respondents adhere to the PA guidelines (i.e., 150 minutes of moderate to vigorous PA per week) as shown in Table 3. The median number of active minutes per day and week are also clearly above the threshold.

Table 3. *Adherence to PA guidelines according the three data donation methods.*

	N	Adherence to PA guidelines according source	Median Active minutes - Week	Median Active minutes - Day
Copy data - 1 day	304	78.0%	444.5 (MAD = 423.0)	63.5 (MAD = 60.4)
Copy data - 1 week	92	90.2%	451.0 (MAD = 315.1)	64.4 (MAD = 40.5)
Upload data	31	83.3%	356.0 (MAD = 189.8)	50.9 (MAD = 27.1)

The comparison of adherence according to the SQUASH versus adherence according to the data donation methods is shown in Figure 2. This is visualized separately for various groups of respondents based on the number of data sources that a respondent used to donate data. Adherence according to the 1-day data is consistently closest to the adherence according to the SQUASH. Adherence according to the week of data and Fitbit are both higher and closer to one other.

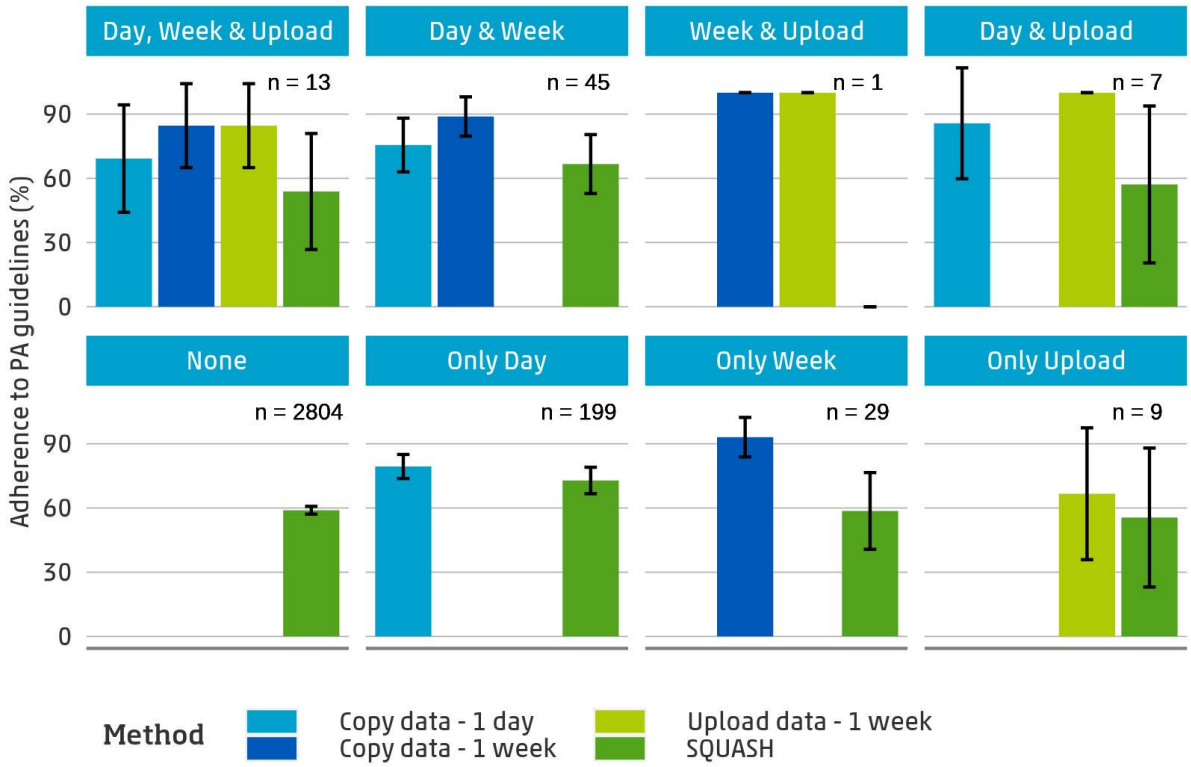

Figure 2. *Comparison of the percentage of respondents adhering to the PA between the multiple donation methods and the SQUASH. Comparison is shown separately for the users who completed either 3, 2 or only 1 donation method (or none).*

NB: The errorbars show the 95% confidence interval. No statistical testing is done due to limited case numbers.

Discussion

The current study compared three data donation methods to collect PA data from personal activity trackers to examine differences in response, representativeness and substantive outcomes. In general, the majority of people with a tracker was willing to donate data. Contrary to the expectations these percentages were higher than the willingness percentages found in earlier studies (Luiten, Toepoel, Zandvliet, 2021; Kraakman et al., 2023), potentially as LISS panel members are more used to participate in studies utilizing alternative and innovative methods of data collection. Response rates for copying data into the questionnaire ranged between 70 and 81%, whereas uploading a spreadsheet was done by 50% of the eligible respondents, which can potentially be explained by the many steps required to do this. For Garmin, Apple and Samsung we already concluded while developing the instructions that it would demand too much from respondents to down- and upload a spreadsheet with data, but apparently even some of the Fitbit users experienced difficulties completing all steps (e.g. due to technical issues, uploading empty spreadsheets or even the wrong files).

In contrast, copying the data was presumably easier and may not even have been experienced as an additional task, as this was presented as an additional question within the questionnaire. A disadvantage of this methods was that rounding was done occasionally (f.e., 9 respondents who completed exactly 10,000 steps, and in total 113 respondents reported a multiple of 100 steps). Another drawback was that the available indicators depended largely on the device: most trackers provide the number of steps (93.7%) whereas heartrate was available least often (56.6%). Therefore, data of only 60% of the respondents could be used in the substantive analyses for comparison with the other measurement methods. PA guidelines do not yet incorporate advice on the number of steps, but in the future they might as steps are an indicator that most trackers measure and is easily understood by the general public.

The biggest challenge in data donation of personal trackers is the number and selectivity of respondents that own a personal activity tracker or a smartwatch. Although tracker ownership was similar to what was found in other studies (Luiten, Toepoel, Zandvliet, 2021; Kraakman et al., 2023), we focused on the four most popular brands for the 1-week data donation reducing the number of respondents that could participate. However, LISS panel respondents participate in similar innovative type of studies more often, potentially resulting in more respondents than can be expected from the general population. Regarding the representativeness, we specifically recruited respondents with a personal tracker to participate reducing the overall representativeness of the sample. Respondents who owned a personal activity tracker were younger, higher educated and more active. Subsequently, an additional age bias occurred in the one week data donation (either by copying or uploading), which can possibly be explained by the difficulty of the task. Copying data of one day suffers from a slightly different bias pattern; here an additional bias occurred amongst the higher educated. In general, the models suffered from low explained variance in the data, which was likely due to the unbalanced data.

The substantive outcomes show that according to all three data donation methods people are very active and adhere to the PA guidelines generally. Data cleaning had to be done for all three data donation methods, but also for the SQUASH, as SQUASH results were unavailable for 12% of the respondents due to implausible responses in the survey. This stresses the issue of measurement errors in the SQUASH. When comparing the adherence according the SQUASH with the different data donation methods, adherence according the donated day data was closest to the SQUASH results. Data of one week (either copied or uploaded) resulted in more adhering respondents. It is important to note that this analysis shows measurement differences between the different objective measurement methods, of which the origin should be further investigated.

To conclude, all three data donation methods suffer from selection bias: only a rather selective group owns a personal activity tracker, resulting to a small pool of potential respondents. Within that group, it seems most feasible to ask respondents to copy only the prior day of data from their personal activity tracker into a questionnaire when looking at response rates and representativeness, but that would still suffer from an inflated percentage of adherence to the PA guidelines compared to measurements with the SQUASH. For the part of the population with a personal activity tracker, data donation may be a feasible method to determine their adherence to PA guidelines, although future research should still examine how measurements of different brands compare and can be combined. Whereas these objective measurement methods will not suffer from measurement error due to recall and social desirability bias, other sources of measurement error do likely occur.

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Appendix A – Full project description

In this project the goal was to collect survey data, high frequency sensor data and the donated PA data from personal activity trackers.

Screening Questionnaire

In June 2021, first a screening questionnaire was fielded to all active LISS panel member of 16 years and older. They were asked whether they owned and actively used a personal smartwatch or activity tracker, and if yes (25.2%), what brand they used (n=5.240 response). Out of the more than 9 different brands of reported activity trackers, amongst which both watches and phones, we decided to focus on the four most reported brands: Apple watch, Fitbit, Garmin and Samsung watch. The (initial) reasoning behind this selection was practical: there were limited resources available to develop instruction materials for all reported (10+) brands, so we chose to focus on the top four reported.

Pre Questionnaire

In October 2021, we fielded the pre questionnaire to the 781 respondents who had reported in the screening questionnaire to use a personal activity tracker from one of the four brands, supplemented with a random selection of 2.093 panel members who indicated not using one. From the 3.874 invited panel members, 3.370 responded. In addition to questions on PA, respondents were invited to participate in a PA study where they would wear a research-grade activity tracker (ActivPAL) for a week. Furthermore, respondents owning a personal activity tracker were asked whether they were willing to donate their PA data, either by copying their data manually in a survey or by exporting a spreadsheet file from their device and uploading the file within the survey. Finally, respondents were invited to participate in a PA study where they would wear an ActivPAL for 8 consecutive days and nights (n=1.672 were willing to participate).

Wearing the ActivPAL

Out of the 1.672 respondents who were willing to wear the ActivPAL for 8 days, 465 respondents also used a personal activity tracker from one of the four brands. These respondents were complemented with a random selection of 150 respondents who were also willing to wear the ActivPAL and indicated they do not own a personal activity tracker. In total, 615 respondents were invited to wear the ActivPAL for 8 days. Since the number of available ActivPALs was limited to approximately 150 devices, respondents participated in batches according to the number of available devices. From February to June 2022 respondents participated in wearing the ActivPAL, which were sent to them by the postal services including clear instructions on how to wear the devices. After the wear period of 8 days, respondents returned the devices by the postal services. The data were exported and saved, the devices were cleaned and send out again to the next batch of participants.

Post Questionnaire

In July 2022, the post questionnaire was sent to 3.682 members that were still in the panel and had been invited to the pre questionnaire. This questionnaire contained the same PA questions as used in the pre questionnaire. Additionally, all 626 respondents with a personal activity tracker were asked to donate their data by manually entering the activity indicators of the prior day from their device in the questionnaire. 2.929 panel members responded to the questionnaire.

Evaluation Questionnaire

In August 2022, an additional evaluation questionnaire was fielded to all respondents who wore an ActivPAL. Of the 503 participants in the ActivPAL study, 221 also wore a personal activity tracker in the week of the study. These 221 respondents were asked to manually report PA indicators from their device into the survey for the same week they wore the ActivPAL. 61 Fitbit users were also asked to

export the PA spreadsheet file from their device from the same week they wore the ActivPAL, and donate this file by uploading it within the survey.

Appendix B – LISS

The LISS panel is based on a traditional probability sample drawn from the Dutch population register by Statistics Netherlands and managed by Centerdata. The LISS panel consists of approximately 5,000 households, comprising 7,500 panel members, representative of the Dutch population. Individuals who do not speak Dutch and individuals younger than 16 years of age are excluded and people cannot register themselves to become a respondent for the LISS panel. The initial set-up of the panel was funded by the Dutch Research Council (NWO). From all panel member demographics are assessed when entering the panel (i.e., sex, age, education level). These are linked to the data retrospectively. Panel members receive an incentive of 15 euros per hour and members who do not have a computer and/or internet access are provided with the necessary equipment at home (for further information about the LISS panel and open access data see: https://www.lissdata.nl; in English). All data collection procedures were defined in a mutual data exchange agreement between Statistics Netherlands and Centerdata.

Appendix C – Screenshots of data donation instructions in questionnaire

Donate 1 day

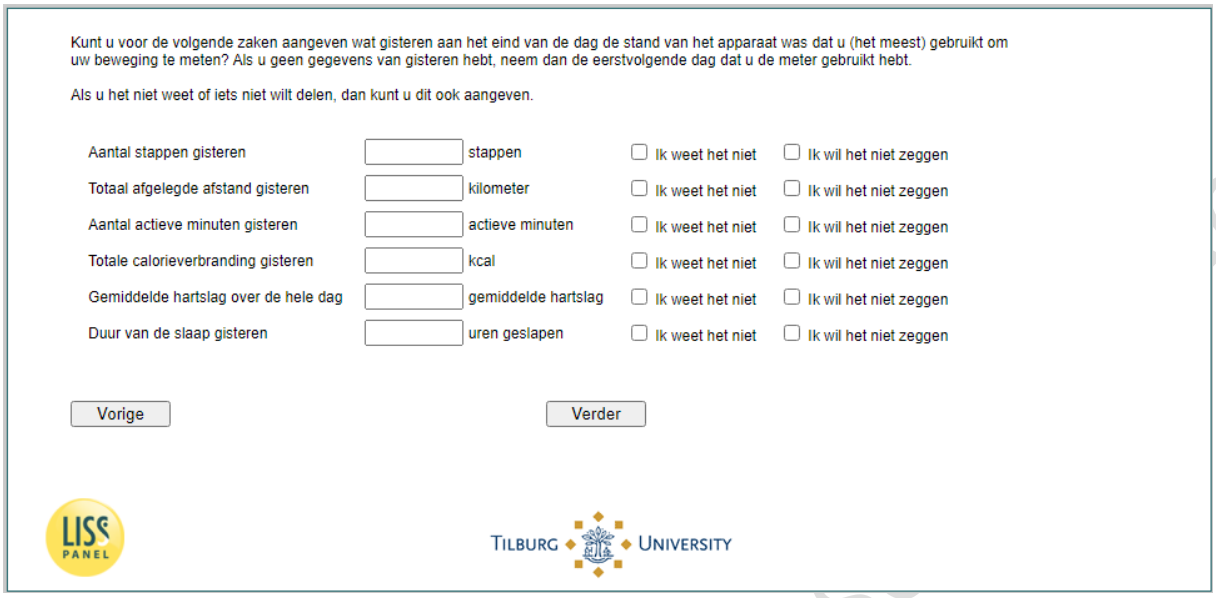

Figure 3 Respondents were asked to donate their data by manually entering the activity indicators of the prior day from their device in the questionnaire, they could choose to answer I don't know or I don't want to share.

Donate 1 week

Figure 4 Introduction with explanation of the interest in data from personal trackers.

Figure 5 Question on willingness to share data from personal tracker by copying the data

Figure 6 Instruction on where to find the personal tracker data (example for Garmin, but the actual manual was dependent on the brand that the respondent had indicated to own)

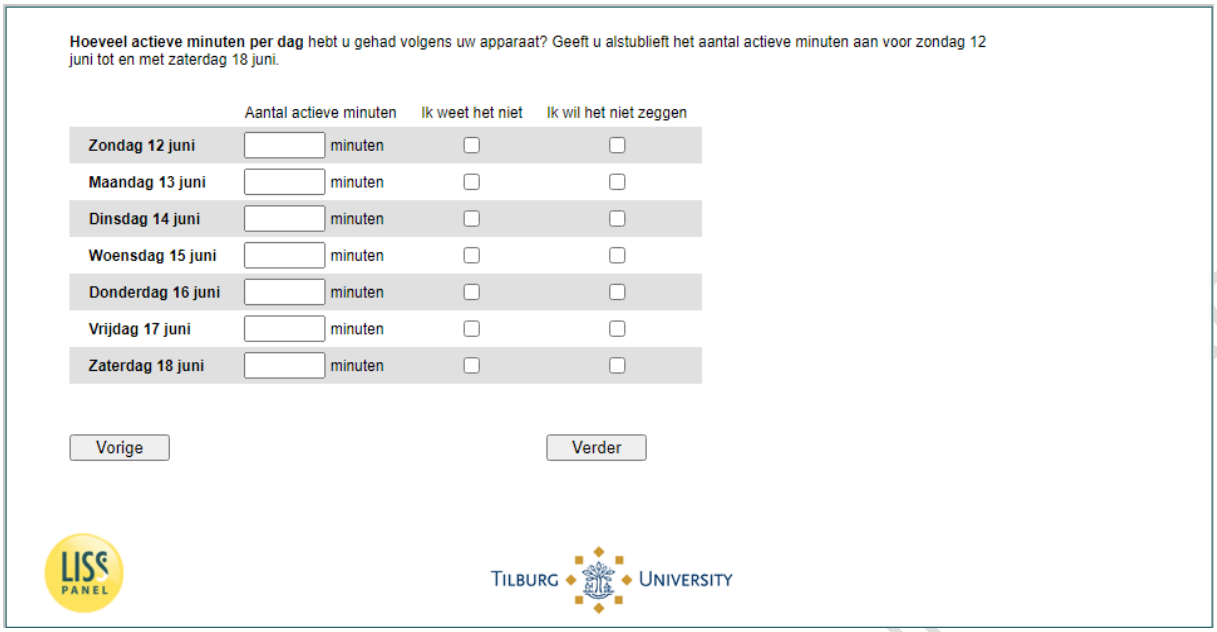

Figure 7 Respondents were asked to donate their data by manually entering the values per indicator for the full week, they could choose to answer I don't know or I don't want to share. This screenshot shows the instructions for active minutes; similar screens were shown for steps, heart rate, sleep, calories and distance.

Donate spreadsheet (only Fitbit)

Figure 8 Question on willingness to share data from personal tracker by downloading the data and uploading it in the questionnaire

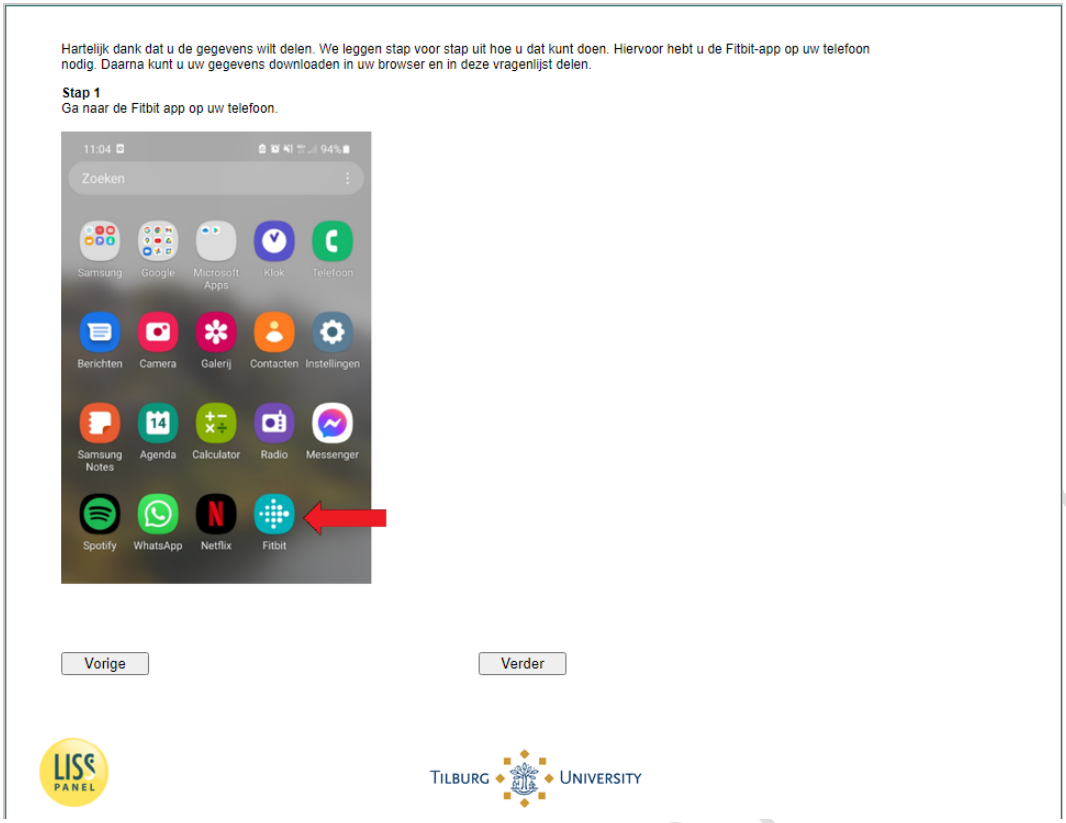

Figure 9 Step 1 of the instruction to download the data - open the Fitbit application

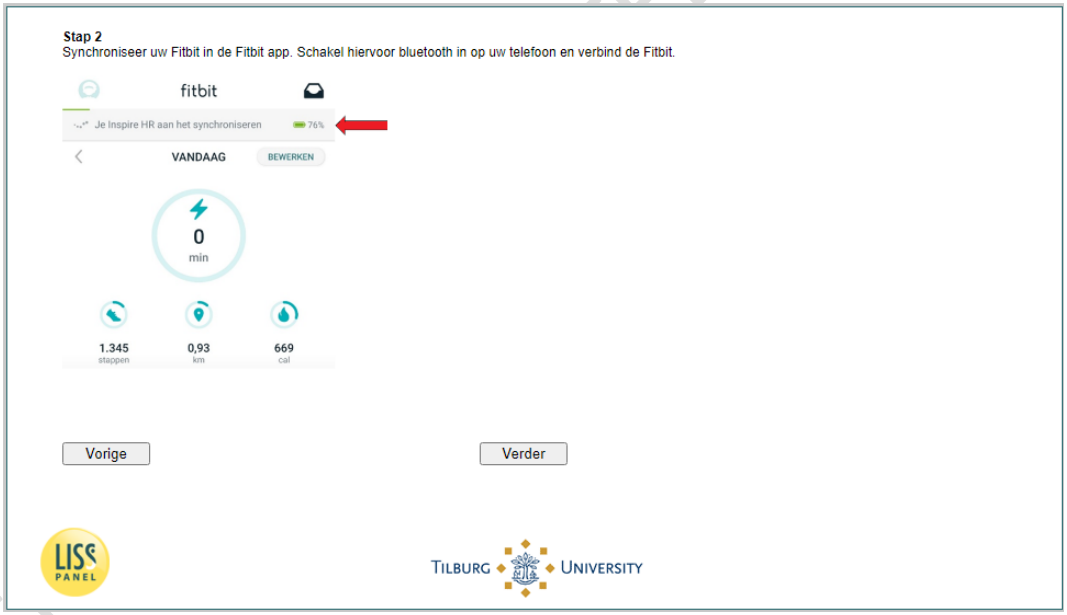

Figure 10 Step 2 of the instruction to download the data - synchronize the Fitbit application with the Fitbit device

Figure 11 Step 3 of the instruction to download the data – go to the Fitbit website

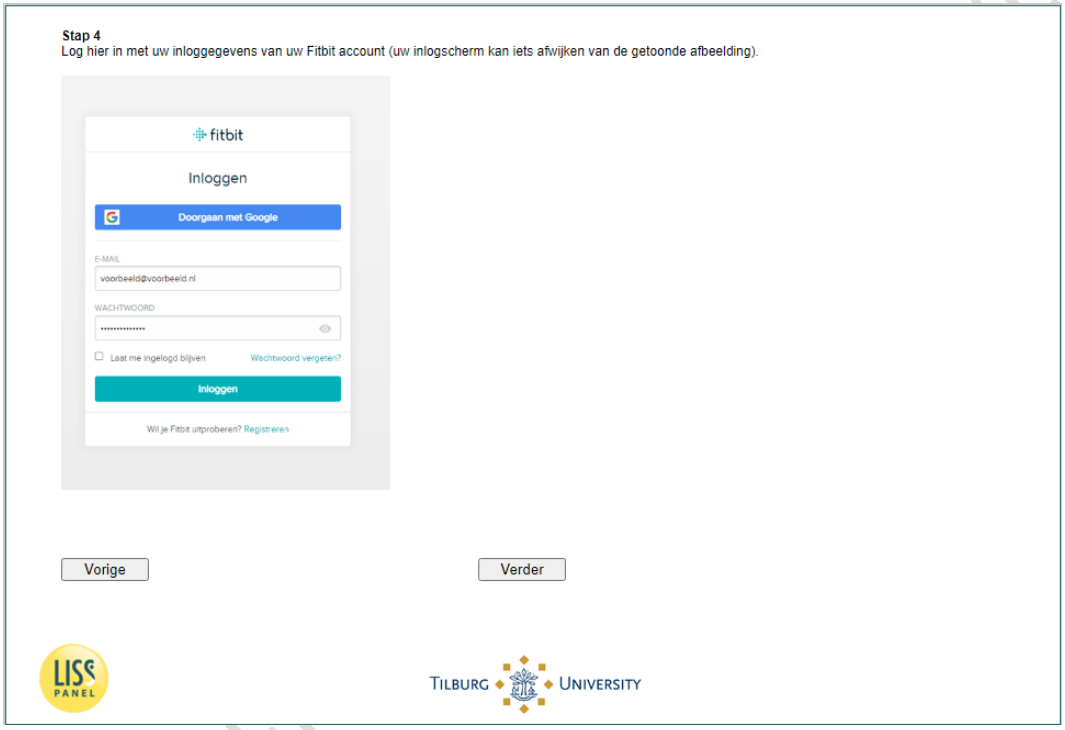

Figure 12 Step 4 of the instruction to download the data – login on the Fitbit website

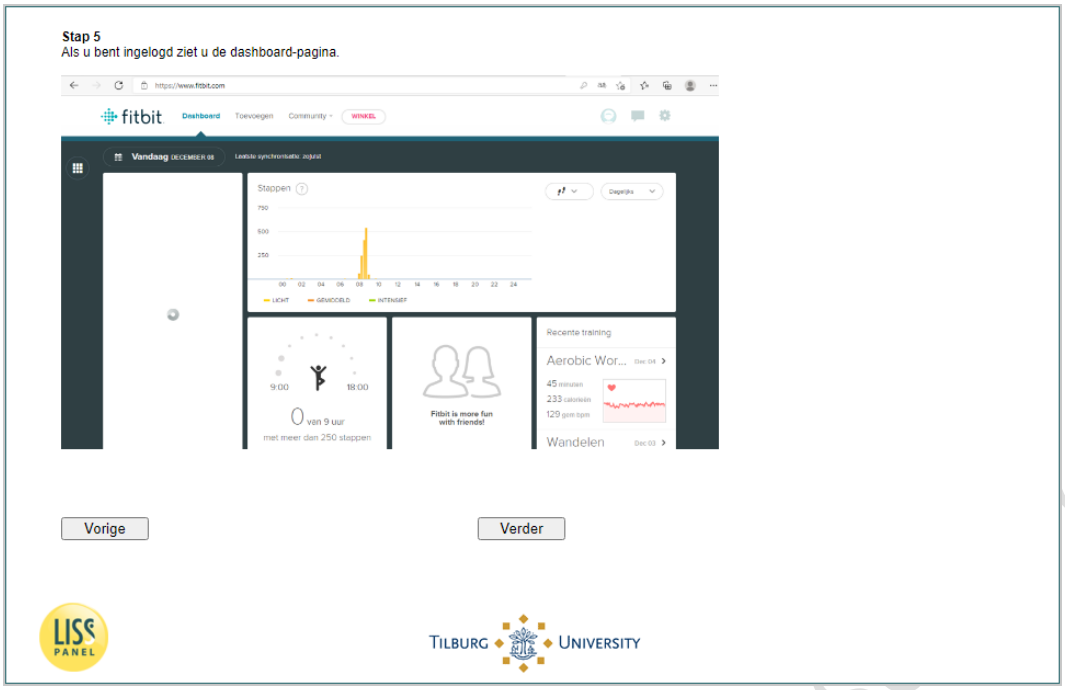

Figure 13 Step 5 of the instruction to download the data – after logging in you will see this dashboard

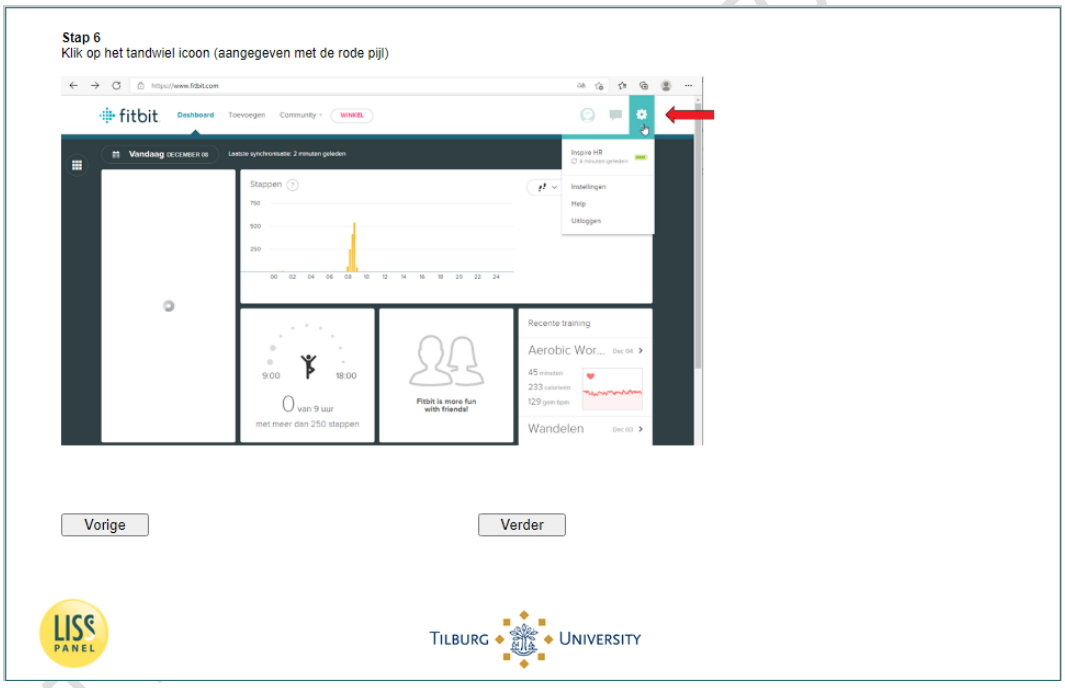

Figure 14 Step 6 of the instruction to download the data – click on the wheel icon

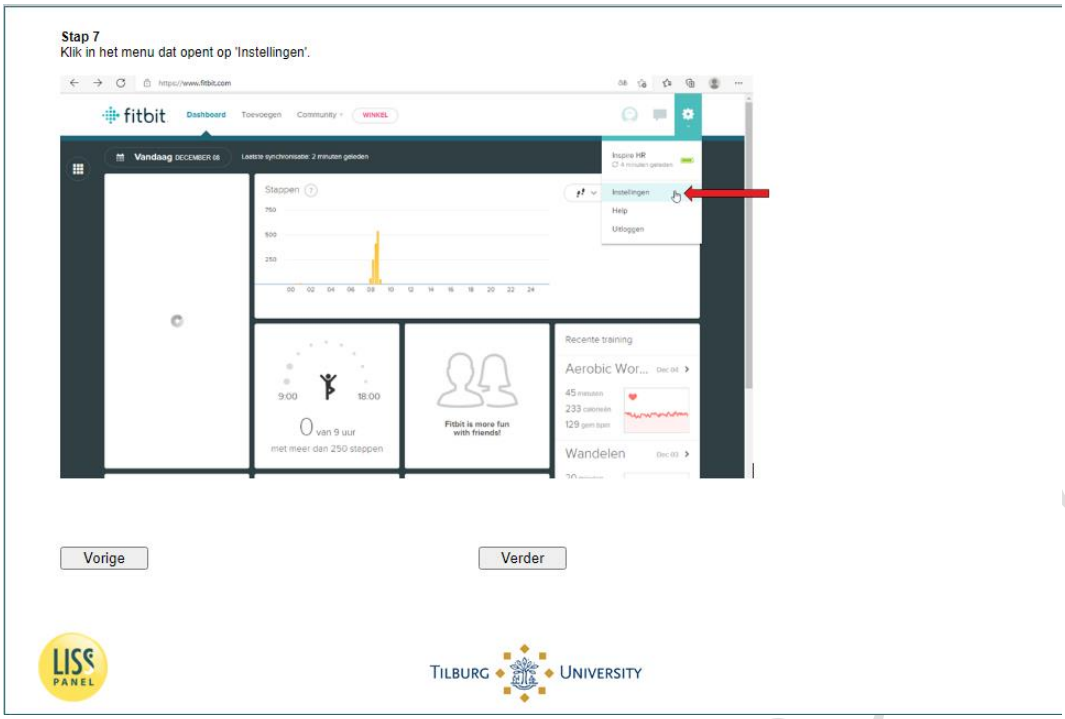

Figure 15 Step 7 of the instruction to download the data – go to settings

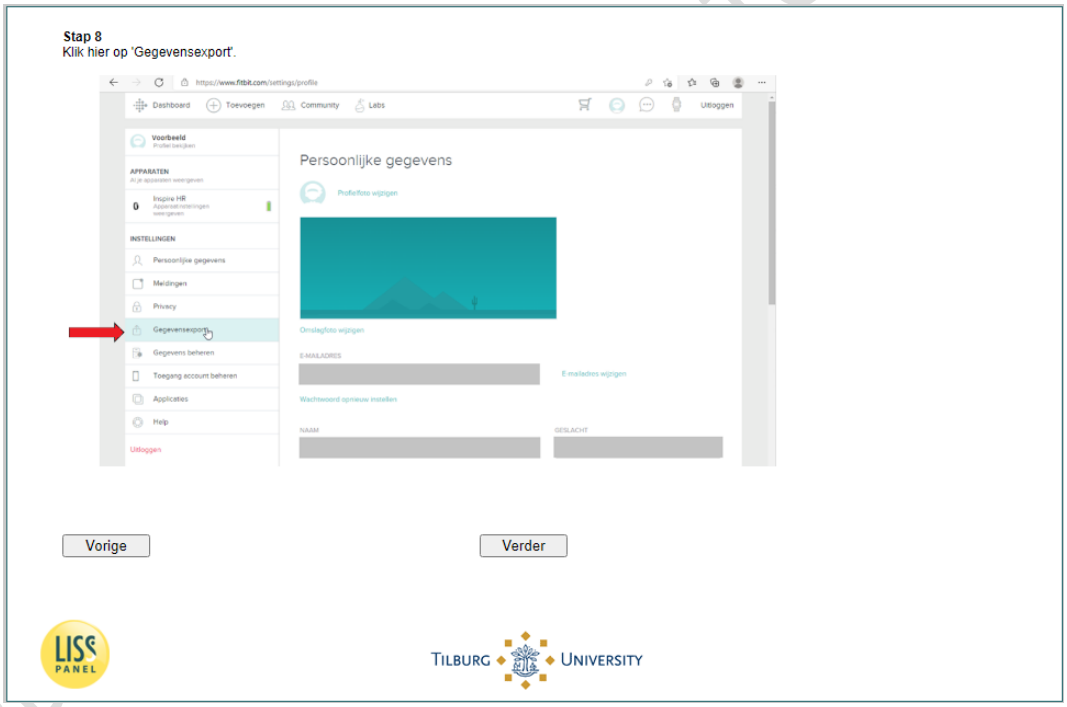

Figure 16 Step 8 of the instruction to download the data – click on data export

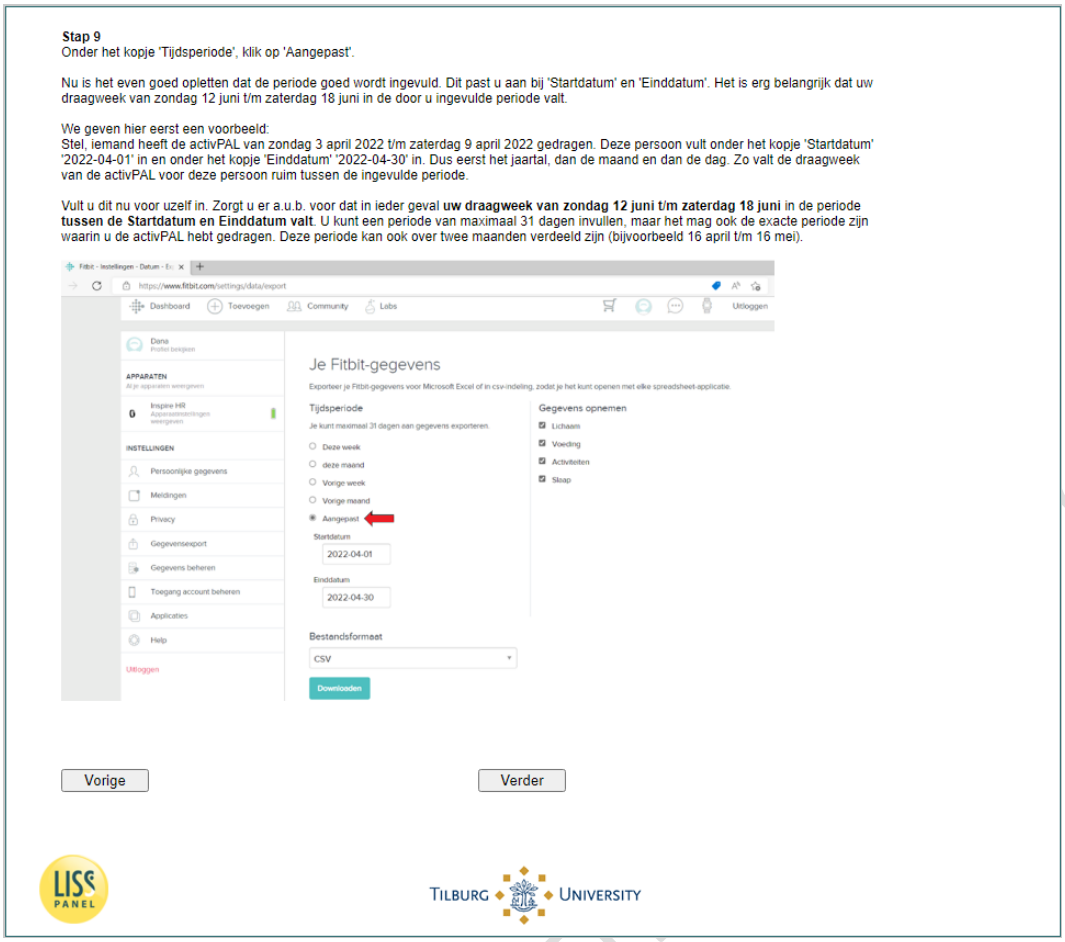

Figure 17 Step 9 of the instruction to download the data – click on period, and then on modified. Change the start and end dates to the following: [dates of wearing the ActivPAL were imputed].

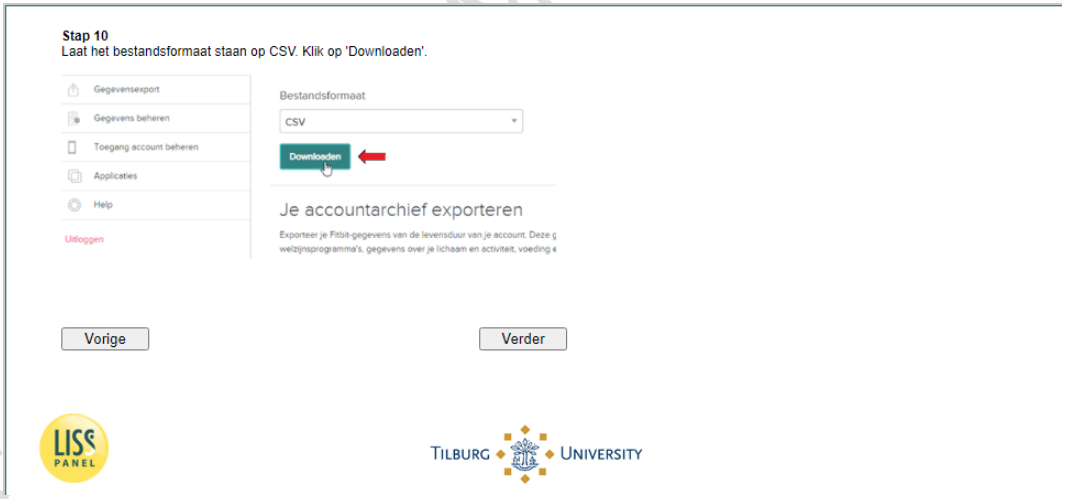

Figure 18 Step 1 of the instruction to download the data – leave the file format to csv and download the data

Figure 19 Step 11 of the instruction to download the data – the file is saved in the downloads folder

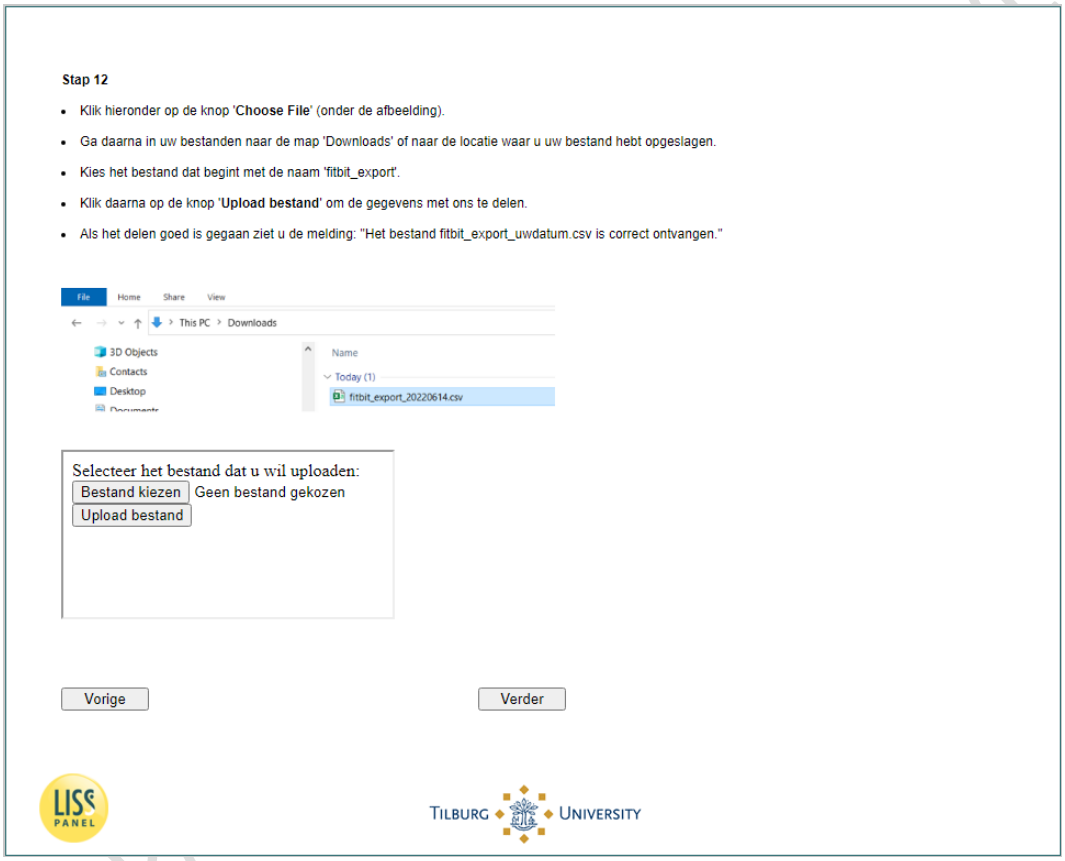

Figure 20 Step 12 of the instruction to download the data – click on 'choose file' to select the file and click on 'upload file' to upload the file. You will receive a confirmation on this screen.'

Appendix D – Demographic composition of the response in the various steps

Table D.1. *Demographic composition of the response of the pre questionnaire, owning a personal tracker, copying and uploading data.*

	Pre questionnaire (n=3370)	Owning a personal tracker (n=626)	Copy data – 1 day (n=507)	Copy data – 1 week (n=155)	Upload data (n=34)
Age					
18 - 35	18.5%	27.6%	27.0%	31.6%	38.2%
35 - 49	19.1%	25.7%	21.8%	21.9%	11.8%
50 - 65	26.4%	26.5%	26.2%	32.3%	38.2%
65+	36.1%	20.1%	21.9%	14.2%	11.8%
Gender					
Male	47.4%	44.6%	43.2%	40.6%	26.5%
Female	52.6%	55.4%	56.8%	59.4%	73.5%
Educational level					
Low	25.9%	14.5%	13.8%	14.2%	5.9%
Middle	34.4%	33.1%	32.6%	29.7%	17.6%
High	39.7%	52.4%	53.6%	56.1%	76.5%