

# 1563<sup>2026</sup>

**SOEP** Survey Papers  
Series D – Variable Descriptions and Coding

## SOEP-IS 2024 – DIPS3\_DAILY: Daily Diaries and Smartphone Sensing on the Daily Level (DIPS Project)

Michael Krämer, Vanessa Brandes, Martin Gerike, Yannick Roos, Ramona Schoedel, Cornelia Wrzus, and David Richter

Running since 1984, the German Socio-Economic Panel (SOEP) is a wide-ranging representative longitudinal study of private households, located at the German Institute for Economic Research, DIW Berlin.

The aim of the SOEP Survey Papers Series is to thoroughly document the survey's data collection and data processing. The SOEP Survey Papers is comprised of the following series:

Series A – Survey Instruments (Erhebungsinstrumente)  
Series B – Survey Reports (Methodenberichte)  
Series C – Data Documentation (Datendokumentationen)  
Series D – Variable Descriptions and Coding  
Series E – SOEPmonitors  
Series F – SOEP Newsletters  
Series G – General Issues and Teaching Materials

The SOEP Survey Papers are available at <http://www.diw.de/soepsurveyspapers>

Editors:

Dr. Jan Goebel, DIW Berlin  
Dr. Christian Hunkler, DIW Berlin  
Prof. Dr. Philipp Lersch, DIW Berlin and Humboldt-Universität zu Berlin  
Dr. Levent Neyse, DIW Berlin and Berlin Social Science Center (WZB)  
Prof. Dr. Carsten Schröder, DIW Berlin and Freie Universität Berlin  
Prof. Dr. Sabine Zinn, DIW Berlin and Humboldt-Universität zu Berlin

Please cite this paper as follows:

Michael Krämer, Vanessa Brandes, Martin Gerike, Yannick Roos, Ramona Schoedel, Cornelia Wrzus, and David Richter, 2026. SOEP-IS 2024 – DIPS3\_DAILY: Daily Diaries and Smartphone Sensing on the Daily Level (DIPS Project). SOEP Survey Papers 1563: Series D – Variable Descriptions and Coding. Berlin: DIW Berlin/SOEP

This work is licensed under a Creative Commons Attribution-ShareAlike 4.0 International License.  
© 2026 by SOEP

ISSN: 2193-5580 (online)

DIW Berlin  
German Socio-Economic Panel (SOEP)  
Anton-Wilhelm-Amo-Straße 58  
10117 Berlin  
Germany

[soeppapers@diw.de](mailto:soeppapers@diw.de)

# SOEP-IS 2024 – DIPS3\_DAILY: Daily Diaries and Smartphone Sensing on the Daily Level (DIPS Project)

Michael Krämer, Vanessa Brandes, Martin Gerike, Yannick Roos, Ramona Schoedel, Cornelia Wrzus, and David Richter

2026

## Contents

<b>1</b>	<b>Introduction</b>	<b>5</b>
	Overall Project Description . . . . .	5
	DIPS3 Data Collection . . . . .	5
	Daily-Level Data . . . . .	5
	References . . . . .	6
<b>2</b>	<b>Identifiers</b>	<b>6</b>
	pid – Person ID . . . . .	6
	subsample – Subsample . . . . .	7
	syear – Survey Year . . . . .	7
	n_diary – Questionnaire Count . . . . .	8
	n_days – Study Day Count . . . . .	8
	day – Day of the Week . . . . .	8
	weekend – Weekend . . . . .	9
	ep_start – Start of Episode . . . . .	9
	ep_end – End of Episode . . . . .	10
	ep_dur – Duration of Episode . . . . .	10
<b>3</b>	<b>Daily Diary</b>	<b>10</b>
	mood_awake – Mood: Awake . . . . .	10
	mood_content – Mood: Content . . . . .	11
	mood_calm – Mood: Calm . . . . .	11
	mood_energetic – Mood: Full of Energy . . . . .	12
	mood_well – Mood: Well . . . . .	12
	mood_relaxed – Mood: Relaxed . . . . .	13
	frie_dur_sub – Friends: Duration Rating . . . . .	13
	frie_dur_obj – Friends: Duration in Hours . . . . .	14
	frie_val – Friends: Valence . . . . .	14
	coll_dur_sub – Colleagues: Duration Rating . . . . .	15
	coll_dur_obj – Colleagues: Duration in Hours . . . . .	15
	coll_val – Colleagues: Valence . . . . .	15
	part_dur_sub – Partner: Duration Rating . . . . .	16
	part_dur_obj – Partner: Duration in Hours . . . . .	16
	part_val – Partner: Valence . . . . .	17
	kids_dur_sub – Own Children: Duration Rating . . . . .	17
	kids_dur_obj – Own Children: Duration in Hours . . . . .	18
	kids_val – Own Children: Valence . . . . .	18
	fami_dur_sub – Other Family Members: Duration Rating . . . . .	19
	fami_dur_obj – Other Family Members: Duration in Hours . . . . .	19
	fami_val – Other Family Members: Valence . . . . .	20
	othe_dur_sub – Other People: Duration Rating . . . . .	20
	othe_dur_obj – Other People: Duration in Hours . . . . .	21
	othe_val – Other People: Valence . . . . .	21
	desire_social – Desire For Social Contact . . . . .	22
	desire_alone – Desire To Be Alone . . . . .	22
<b>4</b>	<b>Calls</b>	<b>23</b>
	n_calls – Number of Calls . . . . .	23
	dur_calls – Duration of Calls . . . . .	23

<b>5</b>	<b>Texts</b>	<b>24</b>
	texts_outgoing_freq – Number of Texts Sent . . . . .	24
	texts_outgoing_length – Character Count of Texts Sent . . . . .	24
<b>6</b>	<b>App Usage</b>	<b>24</b>
	comm_app_freq – Communication Apps: Frequency . . . . .	25
	comm_app_time – Communication Apps: Duration . . . . .	25
	socmed_app_freq – Social Media Apps: Frequency . . . . .	26
	socmed_app_time – Social Media Apps: Duration . . . . .	26
	audio_app_freq – Audio Entertainment Apps: Frequency . . . . .	26
	audio_app_time – Audio Entertainment Apps: Duration . . . . .	27
	career_app_freq – Career Apps: Frequency . . . . .	27
	career_app_time – Career Apps: Duration . . . . .	27
	create_app_freq – Creativity Apps: Frequency . . . . .	28
	create_app_time – Creativity Apps: Duration . . . . .	28
	dating_app_freq – Dating Apps: Frequency . . . . .	29
	dating_app_time – Dating Apps: Duration . . . . .	29
	finance_app_freq – Finance Apps: Frequency . . . . .	29
	finance_app_time – Finance Apps: Duration . . . . .	30
	food_app_freq – Food Apps: Frequency . . . . .	30
	food_app_time – Food Apps: Duration . . . . .	31
	game_app_freq – Game Apps: Frequency . . . . .	31
	game_app_time – Game Apps: Duration . . . . .	31
	health_app_freq – Health Apps: Frequency . . . . .	32
	health_app_time – Health Apps: Duration . . . . .	32
	internet_app_freq – Internet Apps: Frequency . . . . .	33
	internet_app_time – Internet Apps: Duration . . . . .	33
	know_app_freq – Knowledge Apps: Frequency . . . . .	33
	know_app_time – Knowledge Apps: Duration . . . . .	34
	news_app_freq – News Apps: Frequency . . . . .	34
	news_app_time – News Apps: Duration . . . . .	35
	orientat_app_freq – Orientation Apps: Frequency . . . . .	35
	orientat_app_time – Orientation Apps: Duration . . . . .	35
	photo_app_freq – Photography Apps: Frequency . . . . .	36
	photo_app_time – Photography Apps: Duration . . . . .	36
	read_app_freq – Reading Apps: Frequency . . . . .	36
	read_app_time – Reading Apps: Duration . . . . .	37
	security_app_freq – Security Apps: Frequency . . . . .	37
	security_app_time – Security Apps: Duration . . . . .	38
	settings_app_freq – Settings Apps: Frequency . . . . .	38
	settings_app_time – Settings Apps: Duration . . . . .	38
	shop_app_freq – Shopping Apps: Frequency . . . . .	39
	shop_app_time – Shopping Apps: Duration . . . . .	39
	spirit_app_freq – Spirituality Apps: Frequency . . . . .	40
	spirit_app_time – Spirituality Apps: Duration . . . . .	40
	time_app_freq – Time Apps: Frequency . . . . .	40
	time_app_time – Time Apps: Duration . . . . .	41
	tools_app_freq – Tools Apps: Frequency . . . . .	41
	tools_app_time – Tools Apps: Duration . . . . .	42
	transport_app_freq – Transport Apps: Frequency . . . . .	42
	transport_app_time – Transport Apps: Duration . . . . .	42

visual_app_freq – Visual Entertainment Apps: Frequency . . . . .	43
visual_app_time – Visual Entertainment Apps: Duration . . . . .	43
weather_app_freq – Weather Apps: Frequency . . . . .	44
weather_app_time – Weather Apps: Duration . . . . .	44
<b>7 Conversation Detection</b>	<b>44</b>
n_aware – AWARE Conversations: Samplings . . . . .	45
n_voice – AWARE Conversations: Conv. Detected . . . . .	45
prop_voice – Proportion of Conversations . . . . .	46
<b>8 Device Status</b>	<b>46</b>
shutdown – Number of Shutdown Events . . . . .	46
booted – Number of Booting Events . . . . .	47
<b>9 Number Of Contact Entries</b>	<b>47</b>
unique_numbers – Number of Contacts . . . . .	47

# 1 Introduction

## Overall Project Description

The DIPS3 study was part of a larger DFG-funded project on “Personality and social relationship dynamics: Short- and medium-term processes in daily life” with Cornelia Wrzus and David Richter as principal investigators. This project had the overall goal to investigate the dynamic, interdependent short-term and medium-term processes that define multiple social relationships and to better understand how these processes differ between people depending on diverse personality characteristics. To this aim, several modes of data collection were employed jointly, such as active daily diary assessments and passive smartphone sensing of behavioral indicators related to social contact (for measurement properties of these social contact indicators, see Roos et al., 2023). The project was given Institutional Review Board approval by Johannes Gutenberg University Mainz (Process Number: 2018JGU-psychEK-002).

## DIPS3 Data Collection

The third part of data collection within this project was integrated into the SOEP-IS in wave 2022 with the goal of recruiting members of this already existing panel study to take part in an additional, opt-in data collection with a smartphone app. As reported in Roos et al. (2024), 2,507 participants took part in the SOEP-IS study in 2022 of which 1,322 (53%) reported initial interest in the smartphone study and 844 (34%) fulfilled all requirements (i.e., regularly using a smartphone running on Android Version 6.1 or higher). Finally, roughly 15% of the 2022 SOEP-IS sample, that is,  $N = 386$  participants, took part in the 14-day smartphone study and answered at least one daily diary. A detailed examination of sample selectivity and different person-related sampling biases associated with selection into mobile sensing studies (including the DIPS3 study) will be available in Schoedel et al. (2024).

At the end of the 2022 interview, SOEP-IS respondents were asked if they owned a smartphone running on Android OS Version 6.1 or higher and if they were interested in participating in an additional 14-day smartphone study. Those who agreed to participate were sent a postal invitation to take part in the study along with instructions on how to install and set up the PhoneStudy app which runs on Android OS (for more information on the app, see <https://phonestudy.org/en/>). Respondents were informed during the onboarding process about the study procedure and data protection. Informed consent was obtained during the setup of the app.

After the installation of the app, respondents received daily notifications to fill out a brief questionnaire on their mood and social interactions each evening for 14 days. Questionnaires were available each day from 8:00 p.m. to 4:00 a.m. of the following day. Respondents were instructed to answer the questionnaire right before going to bed and received up to two reminders between 8:00 p.m. and 12:00 a.m.. Additionally, smartphone sensing ran on the respondents' phones, passively gathering data on anonymized social interactions, phone and app usage, and contact entries. Respondents received 40€ for participation.

Additional study documentation materials including the wording of all items in English and German, the recruitment flyer, and a report on different app versions can be found on <https://osf.io/zhc49/>. Here, we only present the translated, English version of the items.

## Daily-Level Data

Raw data of smartphone sensing cannot be shared publicly due to privacy concerns and potential identification of respondents due to the richness of these data, especially when

linked with the SOEP-IS panel data. Therefore, for this data release, we selected only the most meaningful behavioral indicators and aggregated them over time.

The first of the three DIPS3 datasets includes the daily diary items and presents the smartphone sensing data on the daily level with each individual observation starting at 4:00 a.m. and ending in the evening at the time stamp when the respondent started to answer their daily diary survey on the research app. The observation period ran over 14 days after app installation, with only very few respondents answering a survey on the 15th day after previously skipping a daily diary. The purpose of this aggregation time window was that the time over which the smartphone sensing indicators are aggregated now roughly corresponds to the time that respondents reported on when answering the daily diaries. Thereby, concurrent associations between smartphone sensing indicators (e.g., communication app usage) and daily diary answers (e.g., mood) can easily be examined.

For the other two datasets, see:

Aggregated on the hourly level:

[https://www.diw.de/documents/publikationen/73/diw\\_01.c.936886.de/diw\\_ssp1431.pdf](https://www.diw.de/documents/publikationen/73/diw_01.c.936886.de/diw_ssp1431.pdf)

Short surveys after calls

[https://www.diw.de/documents/publikationen/73/diw\\_01.c.936889.de/diw\\_ssp1432.pdf](https://www.diw.de/documents/publikationen/73/diw_01.c.936889.de/diw_ssp1432.pdf)

Data can be linked via the “pid” and “n\_days” identifiers.

## References

Roos, Y., Krämer, M. D., Richter, D., Schoedel, R., & Wrzus, C. (2023). Does Your Smartphone “Know” Your Social Life? A Methodological Comparison of Day Reconstruction, Experience Sampling, and Mobile Sensing. *Advances in Methods and Practices in Psychological Science*, 6(3), 1–12.

<https://doi.org/10.1177/25152459231178738>

Roos, Y., Krämer, M. D., Richter, D., & Wrzus, C. (2024). Persons in contexts: The role of social networks and social density for the dynamic regulation of face-to-face interactions in daily life. *Journal of Personality and Social Psychology*.

Advance online publication. <https://doi.org/10.1037/pspp0000512>

Schoedel, R., Reiter, T., Krämer, M. D., Roos, Y., Bühner, M., Richter, D., Mehl, M. R., & Wrzus, C. (2024). Person-Related Selection Bias in Mobile Sensing Research: Robust Findings from Two Panel Studies [Manuscript submitted for publication].

## 2 Identifiers

Data was processed by adding general identifiers to track study progress over time and provide easier filtering. ESM episodes are defined as starting at 4 a.m. and ending when that day’s questionnaire was answered. Thus, they approximately cover the time awake that is retrospectively covered by each daily diary.

### pid – Person ID

---

1233703	10
1247702	14
1344403	11
2001401	10
2012702	9
2037404	14

2043004	14
... (381 rows omitted)	4486
-3 Implausible value	0
-4 Inadmissible multiple response	0
-5 Not included in this version of the questionnaire	0
-6 Version of questionnaire with modified filtering	0
-7 Only available in less restricted edition	0
-8 Question this year not part of survey	0
-9 Missing due to a terminated interview	0

Same person identifier as in SOEP-IS data files

### subsample – Subsample

---

0 [0] no	3750
1 [1] yes	818
-1 No answer	0
-2 Does not apply	0
-3 Implausible value	0
-4 Inadmissible multiple response	0
-5 Not included in this version of the questionnaire	0
-6 Version of questionnaire with modified filtering	0
-7 Only available in less restricted edition	0
-8 Question this year not part of survey	0
-9 Missing due to a terminated interview	0

During the study period, an older, outdated app version was distributed for a restricted time window due to a technical error (N = 72 with outdated version; N = 313 with correct version). This older app version differed slightly in some wordings of the daily diary items. Here, we present documentation for the correct app version that the majority of respondents installed. For more details on this matter and an extensive comparison of the two app versions, see OSF repository.

<https://osf.io/zhc49/>

### syear – Survey Year

---

2022	4568
-1 No answer	0
-2 Does not apply	0
-3 Implausible value	0
-4 Inadmissible multiple response	0
-5 Not included in this version of the questionnaire	0
-6 Version of questionnaire with modified filtering	0
-7 Only available in less restricted edition	0
-8 Question this year not part of survey	0
-9 Missing due to a terminated interview	0

**n\_diary** – Questionnaire Count

---

1	386
2	383
3	378
4	376
5	370
6	364
7	362
... (9 rows omitted)	1949
-3 Implausible value	0
-4 Inadmissible multiple response	0
-5 Not included in this version of the questionnaire	0
-6 Version of questionnaire with modified filtering	0
-7 Only available in less restricted edition	0
-8 Question this year not part of survey	0
-9 Missing due to a terminated interview	0

Counts the number of answered daily diaries starting at 1.

**n\_days** – Study Day Count

---

1	386
2	332
3	337
4	343
5	332
6	337
7	339
... (10 rows omitted)	2162
-3 Implausible value	0
-4 Inadmissible multiple response	0
-5 Not included in this version of the questionnaire	0
-6 Version of questionnaire with modified filtering	0
-7 Only available in less restricted edition	0
-8 Question this year not part of survey	0
-9 Missing due to a terminated interview	0

Counts the number of days after installation starting with 1 at the day after installation where the first daily diary was available to be answered. In contrast to `n_diary`, this variable takes into account when respondents fill out a questionnaire the following day or have gaps when they skipped a questionnaire. Negative values indicate days before a person answered their first daily diary.

**day** – Day of the Week

---

0 [0] Monday	673
--------------	-----

1	[1] Tuesday	661
2	[2] Wednesday	648
3	[3] Thursday	646
4	[4] Friday	648
5	[5] Saturday	637
6	[6] Sunday	655
...	(2 rows omitted)	0
-3	Implausible value	0
-4	Inadmissible multiple response	0
-5	Not included in this version of the questionnaire	0
-6	Version of questionnaire with modified filtering	0
-7	Only available in less restricted edition	0
-8	Question this year not part of survey	0
-9	Missing due to a terminated interview	0

### weekend - Weekend

---

0	[0] no	3276
1	[1] yes	1292
-1	No answer	0
-2	Does not apply	0
-3	Implausible value	0
-4	Inadmissible multiple response	0
-5	Not included in this version of the questionnaire	0
-6	Version of questionnaire with modified filtering	0
-7	Only available in less restricted edition	0
-8	Question this year not part of survey	0
-9	Missing due to a terminated interview	0

### ep\_start - Start of Episode

---

-1	No answer	0
-2	Does not apply	0
-3	Implausible value	0
-4	Inadmissible multiple response	0
-5	Not included in this version of the questionnaire	0
-6	Version of questionnaire with modified filtering	0
-7	Only available in less restricted edition	0
-8	Question this year not part of survey	0
-9	Missing due to a terminated interview	0
04:00:00		4568

Marks the beginning of the episode on each day across which all the mobile sensing variables are aggregated.

**ep\_end** – End of Episode

---

-1	No answer	0
-2	Does not apply	0
-3	Implausible value	0
-4	Inadmissible multiple response	0
-5	Not included in this version of the questionnaire	0
-6	Version of questionnaire with modified filtering	0
-7	Only available in less restricted edition	0
...	(3635 rows omitted)	4561
23:57:44		1
23:58:23		1
23:58:26		1
23:58:36		1
23:59:02		1
23:59:24		1
23:59:54		1

Marks the end of the episode on each day across which all the mobile sensing variables are aggregated. In some case, when the daily diary was answered after midnight, this time point is on the following day from “ep\_start”.

**ep\_dur** – Duration of Episode

---

960.1		3
960.116666666667		1
960.133333333333		1
960.2		1
960.266666666667		2
960.283333333333		3
960.3		4
...	(3635 rows omitted)	4553
-3	Implausible value	0
-4	Inadmissible multiple response	0
-5	Not included in this version of the questionnaire	0
-6	Version of questionnaire with modified filtering	0
-7	Only available in less restricted edition	0
-8	Question this year not part of survey	0
-9	Missing due to a terminated interview	0

Time between “ep\_start” and “ep\_end” given in minutes. This is the length of time across which all mobile sensing variables were aggregated on that day.

**3 Daily Diary****mood\_awake** – Mood: Awake

0	[0] Response -3	171
1	[1] Response -2	305
2	[2] Response -1	537
3	[3] Response 0	415
4	[4] Response 1	997
5	[5] Response 2	1419
6	[6] Response 3	724
...	(2 rows omitted)	0
-3	Implausible value	0
-4	Inadmissible multiple response	0
-5	Not included in this version of the questionnaire	0
-6	Version of questionnaire with modified filtering	0
-7	Only available in less restricted edition	0
-8	Question this year not part of survey	0
-9	Missing due to a terminated interview	0

Today I felt: tired - awake

Wilhelm, P., & Schoebi, D. (2007). *Assessing mood in daily life: Structural validity, sensitivity to change, and reliability of a short-scale to measure three basic dimensions of mood*. *European Journal of Psychological Assessment*, 23(4), 258–267. <https://doi.org/10.1027/1015-5759.23.4.258>

#### mood\_content – Mood: Content

---

0	[0] Response -3	88
1	[1] Response -2	158
2	[2] Response -1	351
3	[3] Response 0	567
4	[4] Response 1	1019
5	[5] Response 2	1504
6	[6] Response 3	881
...	(2 rows omitted)	0
-3	Implausible value	0
-4	Inadmissible multiple response	0
-5	Not included in this version of the questionnaire	0
-6	Version of questionnaire with modified filtering	0
-7	Only available in less restricted edition	0
-8	Question this year not part of survey	0
-9	Missing due to a terminated interview	0

Today I felt: discontent - content

#### mood\_calm – Mood: Calm

---

0	[0] Response -3	90
1	[1] Response -2	174
2	[2] Response -1	400
3	[3] Response 0	656

4	[4] Response 1	998
5	[5] Response 2	1379
6	[6] Response 3	870
...	(2 rows omitted)	1
-3	Implausible value	0
-4	Inadmissible multiple response	0
-5	Not included in this version of the questionnaire	0
-6	Version of questionnaire with modified filtering	0
-7	Only available in less restricted edition	0
-8	Question this year not part of survey	0
-9	Missing due to a terminated interview	0

Today I felt: agitated - calm

### mood\_energetic – Mood: Full of Energy

---

0	[0] Response -3	149
1	[1] Response -2	270
2	[2] Response -1	522
3	[3] Response 0	741
4	[4] Response 1	1345
5	[5] Response 2	1109
6	[6] Response 3	424
...	(2 rows omitted)	8
-3	Implausible value	0
-4	Inadmissible multiple response	0
-5	Not included in this version of the questionnaire	0
-6	Version of questionnaire with modified filtering	0
-7	Only available in less restricted edition	0
-8	Question this year not part of survey	0
-9	Missing due to a terminated interview	0

Today I felt: without energy - full of energy

### mood\_well – Mood: Well

---

0	[0] Response -3	113
1	[1] Response -2	211
2	[2] Response -1	409
3	[3] Response 0	600
4	[4] Response 1	1035
5	[5] Response 2	1380
6	[6] Response 3	812
...	(2 rows omitted)	8
-3	Implausible value	0
-4	Inadmissible multiple response	0
-5	Not included in this version of the questionnaire	0

-6	Version of questionnaire with modified filtering	0
-7	Only available in less restricted edition	0
-8	Question this year not part of survey	0
-9	Missing due to a terminated interview	0

Today I felt: unwell - well

#### mood\_relaxed – Mood: Relaxed

---

0	[0] Response -3	113
1	[1] Response -2	232
2	[2] Response -1	561
3	[3] Response 0	728
4	[4] Response 1	1047
5	[5] Response 2	1167
6	[6] Response 3	712
...	(2 rows omitted)	8
-3	Implausible value	0
-4	Inadmissible multiple response	0
-5	Not included in this version of the questionnaire	0
-6	Version of questionnaire with modified filtering	0
-7	Only available in less restricted edition	0
-8	Question this year not part of survey	0
-9	Missing due to a terminated interview	0

Today I felt: tense - relaxed

#### frie\_dur\_sub – Friends: Duration Rating

---

1	[1] 1 = very little	318
2	[2] 2	421
3	[3] 3	366
4	[4] 4	323
5	[5] 5	341
6	[6] 6	201
7	[7] 7 = very much	203
...	(2 rows omitted)	2395
-3	Implausible value	0
-4	Inadmissible multiple response	0
-5	Not included in this version of the questionnaire	0
-6	Version of questionnaire with modified filtering	0
-7	Only available in less restricted edition	0
-8	Question this year not part of survey	0
-9	Missing due to a terminated interview	0

Now it's about your friends: How much personal contact did you have today?

Answers are given on a 7-point Likert-scale from 1 to 7, with anchors „very little“ and „very much“; Alternative response: „Did not have contact with friends“ leads directly to next question on colleagues.

### frie\_dur\_obj – Friends: Duration in Hours

---

5	[5] 0h:05min	238
15	[15] 0h:15min	230
30	[30] 0h:30min	292
60	[60] 1h:00min	245
90	[90] 1h:30min	148
120	[120] 2h:00min	176
150	[150] 2h:30min	109
...	(45 rows omitted)	3130
-3	Implausible value	0
-4	Inadmissible multiple response	0
-5	Not included in this version of the questionnaire	0
-6	Version of questionnaire with modified filtering	0
-7	Only available in less restricted edition	0
-8	Question this year not part of survey	0
-9	Missing due to a terminated interview	0

Now it's about your friends: How long was your personal contact today?

The answer is given on a scroll wheel: „0h:05min“, „0h:15min“, „0h:30min“, „1h:00min“, „1h:30min“, ... (in 30min increments until...), „24h:00min“.

### frie\_val – Friends: Valence

---

1	[1] 1 = unpleasant	2
2	[2] 2	5
3	[3] 3	35
4	[4] 4	124
5	[5] 5	364
6	[6] 6	753
7	[7] 7 = pleasant	885
...	(2 rows omitted)	2400
-3	Implausible value	0
-4	Inadmissible multiple response	0
-5	Not included in this version of the questionnaire	0
-6	Version of questionnaire with modified filtering	0
-7	Only available in less restricted edition	0
-8	Question this year not part of survey	0
-9	Missing due to a terminated interview	0

Now it's about your friends: How was the contact?

Answers are given on a 7-point Likert-scale from 1 to 7, with anchors „unpleasant“ and „pleasant“.

**coll\_dur\_sub** – Colleagues: Duration Rating

---

1	[1] 1 = very little	141
2	[2] 2	153
3	[3] 3	157
4	[4] 4	252
5	[5] 5	286
6	[6] 6	283
7	[7] 7 = very much	309
...	(2 rows omitted)	2987
-3	Implausible value	0
-4	Inadmissible multiple response	0
-5	Not included in this version of the questionnaire	0
-6	Version of questionnaire with modified filtering	0
-7	Only available in less restricted edition	0
-8	Question this year not part of survey	0
-9	Missing due to a terminated interview	0

Now it's about your colleagues: How much personal contact did you have today?  
 Answers are given on a 7-point Likert-scale from 1 to 7, with anchors „very little“ and „very much“; Alternative response: „Did not have contact with colleagues“ leads directly to next question on partner.

**coll\_dur\_obj** – Colleagues: Duration in Hours

---

5	[5] 0h:05min	132
15	[15] 0h:15min	93
30	[30] 0h:30min	109
60	[60] 1h:00min	103
90	[90] 1h:30min	90
120	[120] 2h:00min	88
150	[150] 2h:30min	39
...	(45 rows omitted)	3914
-3	Implausible value	0
-4	Inadmissible multiple response	0
-5	Not included in this version of the questionnaire	0
-6	Version of questionnaire with modified filtering	0
-7	Only available in less restricted edition	0
-8	Question this year not part of survey	0
-9	Missing due to a terminated interview	0

Now it's about your colleagues: How long was your personal contact today?  
 The answer is given on a scroll wheel: „0h:05min“, „0h:15min“, „0h:30min“, „1h:00min“, „1h:30min“, ... (in 30min increments until...), „24h:00min“.

**coll\_val** – Colleagues: Valence

1	[1] 1 = unpleasant	12
2	[2] 2	15
3	[3] 3	55
4	[4] 4	178
5	[5] 5	419
6	[6] 6	546
7	[7] 7 = pleasant	343
...	(2 rows omitted)	3000
-3	Implausible value	0
-4	Inadmissible multiple response	0
-5	Not included in this version of the questionnaire	0
-6	Version of questionnaire with modified filtering	0
-7	Only available in less restricted edition	0
-8	Question this year not part of survey	0
-9	Missing due to a terminated interview	0

Now it's about your colleagues: How was the contact?

Answers are given on a 7-point Likert-scale from 1 to 7, with anchors „unpleasant“ and „pleasant“.

#### part\_dur\_sub - Partner: Duration Rating

---

1	[1] 1 = very little	160
2	[2] 2	213
3	[3] 3	354
4	[4] 4	485
5	[5] 5	679
6	[6] 6	575
7	[7] 7 = very much	956
...	(2 rows omitted)	1146
-3	Implausible value	0
-4	Inadmissible multiple response	0
-5	Not included in this version of the questionnaire	0
-6	Version of questionnaire with modified filtering	0
-7	Only available in less restricted edition	0
-8	Question this year not part of survey	0
-9	Missing due to a terminated interview	0

Now it's about your partner: How much personal contact did you have today?

Answers are given on a 7-point Likert-scale from 1 to 7, with anchors „very little“ and „very much“; Alternative response: „Did not have contact with my partner“ leads directly to next question on children.

#### part\_dur\_obj - Partner: Duration in Hours

---

5	[5] 0h:05min	46
15	[15] 0h:15min	61

30	[30] 0h:30min	102
60	[60] 1h:00min	151
90	[90] 1h:30min	127
120	[120] 2h:00min	168
150	[150] 2h:30min	122
...	(45 rows omitted)	3791
-3	Implausible value	0
-4	Inadmissible multiple response	0
-5	Not included in this version of the questionnaire	0
-6	Version of questionnaire with modified filtering	0
-7	Only available in less restricted edition	0
-8	Question this year not part of survey	0
-9	Missing due to a terminated interview	0

Now it's about your partner: How long was your personal contact today?

Answer is given on a scroll wheel: „0h:05min“, „0h:15min“, „0h:30min“, „1h:00min“, „1h:30min“, ... (in 30min increments until...), „24h:00min“.

#### part\_val – Partner: Valence

---

1	[1] 1 = unpleasant	15
2	[2] 2	36
3	[3] 3	86
4	[4] 4	244
5	[5] 5	540
6	[6] 6	1011
7	[7] 7 = pleasant	1482
...	(2 rows omitted)	1154
-3	Implausible value	0
-4	Inadmissible multiple response	0
-5	Not included in this version of the questionnaire	0
-6	Version of questionnaire with modified filtering	0
-7	Only available in less restricted edition	0
-8	Question this year not part of survey	0
-9	Missing due to a terminated interview	0

Now it's about your partner: How was the contact?

Answers are given on a 7-point Likert-scale from 1 to 7, with anchors „unpleasant“ and „pleasant“.

#### kids\_dur\_sub – Own Children: Duration Rating

---

1	[1] 1 = very little	161
2	[2] 2	246
3	[3] 3	285
4	[4] 4	350
5	[5] 5	398

6	[6] 6	336
7	[7] 7 = very much	368
...	(2 rows omitted)	2424
-3	Implausible value	0
-4	Inadmissible multiple response	0
-5	Not included in this version of the questionnaire	0
-6	Version of questionnaire with modified filtering	0
-7	Only available in less restricted edition	0
-8	Question this year not part of survey	0
-9	Missing due to a terminated interview	0

Now it's about your children: How much personal contact did you have today?  
Answers are given on a Likert-scale from 1 to 7, with anchors „very little“ and „very much“;  
Alternative response: „Did not have contact with my children“ leads directly to next question  
on other family members.

#### kids\_dur\_obj – Own Children: Duration in Hours

---

5	[5] 0h:05min	93
15	[15] 0h:15min	95
30	[30] 0h:30min	152
60	[60] 1h:00min	181
90	[90] 1h:30min	131
120	[120] 2h:00min	152
150	[150] 2h:30min	92
...	(45 rows omitted)	3672
-3	Implausible value	0
-4	Inadmissible multiple response	0
-5	Not included in this version of the questionnaire	0
-6	Version of questionnaire with modified filtering	0
-7	Only available in less restricted edition	0
-8	Question this year not part of survey	0
-9	Missing due to a terminated interview	0

Now it's about your children: How long was your personal contact today?  
The answer is given on a scroll wheel: „0h:05min“, „0h:15min“, „0h:30min“, „1h:00min“,  
„1h:30min“, ... (in 30min increments until...), „24h:00min“.

#### kids\_val – Own Children: Valence

---

1	[1] 1 = unpleasant	9
2	[2] 2	9
3	[3] 3	30
4	[4] 4	116
5	[5] 5	326
6	[6] 6	762
7	[7] 7 = pleasant	886

...	(2 rows omitted)	2430
-3	Implausible value	0
-4	Inadmissible multiple response	0
-5	Not included in this version of the questionnaire	0
-6	Version of questionnaire with modified filtering	0
-7	Only available in less restricted edition	0
-8	Question this year not part of survey	0
-9	Missing due to a terminated interview	0

Now it's about your children: How was the contact?

Answers are given on a 7-point Likert-scale from 1 to 7, with anchors „unpleasant“ and „pleasant“.

### fami\_dur\_sub - Other Family Members: Duration Rating

---

1	[1] 1 = very little	277
2	[2] 2	322
3	[3] 3	303
4	[4] 4	250
5	[5] 5	254
6	[6] 6	138
7	[7] 7 = very much	167
...	(2 rows omitted)	2857
-3	Implausible value	0
-4	Inadmissible multiple response	0
-5	Not included in this version of the questionnaire	0
-6	Version of questionnaire with modified filtering	0
-7	Only available in less restricted edition	0
-8	Question this year not part of survey	0
-9	Missing due to a terminated interview	0

Now it's about other family members: How much personal contact did you have today?

Answers are given on a 7-point Likert-scale from 1 to 7, with anchors „very little“ and „very much“; Alternative response: „Did not have contact with other family members“ leads directly to next question on other people.

### fami\_dur\_obj - Other Family Members: Duration in Hours

---

5	[5] 0h:05min	206
15	[15] 0h:15min	207
30	[30] 0h:30min	229
60	[60] 1h:00min	191
90	[90] 1h:30min	130
120	[120] 2h:00min	123
150	[150] 2h:30min	71
...	(45 rows omitted)	3411
-3	Implausible value	0

-4	Inadmissible multiple response	0
-5	Not included in this version of the questionnaire	0
-6	Version of questionnaire with modified filtering	0
-7	Only available in less restricted edition	0
-8	Question this year not part of survey	0
-9	Missing due to a terminated interview	0

Now it's about other family members: How long was your personal contact today?

The answer is given on a scroll wheel: „0h:05min“, „0h:15min“, „0h:30min“, „1h:00min“, „1h:30min“, ... (in 30min increments until...), „24h:00min“.

### fami\_val – Other Family Members: Valence

---

1	[1] 1 = unpleasant	19
2	[2] 2	22
3	[3] 3	46
4	[4] 4	196
5	[5] 5	321
6	[6] 6	513
7	[7] 7 = pleasant	592
...	(2 rows omitted)	2859
-3	Implausible value	0
-4	Inadmissible multiple response	0
-5	Not included in this version of the questionnaire	0
-6	Version of questionnaire with modified filtering	0
-7	Only available in less restricted edition	0
-8	Question this year not part of survey	0
-9	Missing due to a terminated interview	0

Now it's about other family members: How was the contact?

Answers are given on a 7-point Likert-scale from 1 to 7, with anchors „unpleasant“ and „pleasant“.

### othe\_dur\_sub – Other People: Duration Rating

---

1	[1] 1 = very little	534
2	[2] 2	574
3	[3] 3	515
4	[4] 4	398
5	[5] 5	297
6	[6] 6	187
7	[7] 7 = very much	176
...	(2 rows omitted)	1887
-3	Implausible value	0
-4	Inadmissible multiple response	0
-5	Not included in this version of the questionnaire	0
-6	Version of questionnaire with modified filtering	0

-7	Only available in less restricted edition	0
-8	Question this year not part of survey	0
-9	Missing due to a terminated interview	0

Now it's about other persons: How much personal contact did you have today?

Answers are given on a 7-point Likert-scale from 1 to 7, with anchors „very little“ and „very much“; Alternative response: „Did not have contact with other persons“ leads directly to question on desires.

### othe\_dur\_obj – Other People: Duration in Hours

---

5	[5] 0h:05min	383
15	[15] 0h:15min	389
30	[30] 0h:30min	473
60	[60] 1h:00min	370
90	[90] 1h:30min	210
120	[120] 2h:00min	204
150	[150] 2h:30min	99
...	(45 rows omitted)	2440
-3	Implausible value	0
-4	Inadmissible multiple response	0
-5	Not included in this version of the questionnaire	0
-6	Version of questionnaire with modified filtering	0
-7	Only available in less restricted edition	0
-8	Question this year not part of survey	0
-9	Missing due to a terminated interview	0

Now it's about other persons: How long was your personal contact today?

The answer is given on a scroll wheel: „0h:05min“, „0h:15min“, „0h:30min“, „1h:00min“, „1h:30min“, ... (in 30min increments until...), „24h:00min“.

### othe\_val – Other People: Valence

---

1	[1] 1 = unpleasant	23
2	[2] 2	39
3	[3] 3	98
4	[4] 4	516
5	[5] 5	693
6	[6] 6	765
7	[7] 7 = pleasant	544
...	(2 rows omitted)	1890
-3	Implausible value	0
-4	Inadmissible multiple response	0
-5	Not included in this version of the questionnaire	0
-6	Version of questionnaire with modified filtering	0
-7	Only available in less restricted edition	0
-8	Question this year not part of survey	0

-9 Missing due to a terminated interview 0

Now it's about other persons: How was the contact?

Answers are given on a 7-point Likert-scale from 1 to 7, with anchors „unpleasant“ and „pleasant“.

### desire\_social – Desire For Social Contact

---

1	[1] 1 = does not apply	1237
2	[2] 2	822
3	[3] 3	616
4	[4] 4	757
5	[5] 5	534
6	[6] 6	286
7	[7] 7 = does apply	264
...	(2 rows omitted)	52
-3	Implausible value	0
-4	Inadmissible multiple response	0
-5	Not included in this version of the questionnaire	0
-6	Version of questionnaire with modified filtering	0
-7	Only available in less restricted edition	0
-8	Question this year not part of survey	0
-9	Missing due to a terminated interview	0

I would rather have spent more time in the company of others today.

The answer is given on a 7-point Likert-scale from 1 to 7, with anchors „does not apply“ and „does apply“.

### desire\_alone – Desire To Be Alone

---

1	[1] 1 = does not apply	1155
2	[2] 2	831
3	[3] 3	631
4	[4] 4	766
5	[5] 5	572
6	[6] 6	309
7	[7] 7 = does apply	252
...	(2 rows omitted)	52
-3	Implausible value	0
-4	Inadmissible multiple response	0
-5	Not included in this version of the questionnaire	0
-6	Version of questionnaire with modified filtering	0
-7	Only available in less restricted edition	0
-8	Question this year not part of survey	0
-9	Missing due to a terminated interview	0

I would rather have spent more time alone today.

The answer is given on a 7-point Likert-scale from 1 to 7, with anchors „does not apply“ and „does apply“.

## 4 Calls

From the timestamped call logs, number and duration of incoming and outgoing calls per ESM episode were extracted. Duration of calls is cut off when exceeding over next hour of the day.

### n\_calls - Number of Calls

---

0	2237
1	752
2	501
3	305
4	228
5	142
6	102
... (22 rows omitted)	301
-3 Implausible value	0
-4 Inadmissible multiple response	0
-5 Not included in this version of the questionnaire	0
-6 Version of questionnaire with modified filtering	0
-7 Only available in less restricted edition	0
-8 Question this year not part of survey	0
-9 Missing due to a terminated interview	0

### dur\_calls - Duration of Calls

---

0	2237
0.01666666666666667	5
0.03333333333333333	9
0.05	7
0.06666666666666667	4
0.08333333333333333	3
0.1	4
... (1241 rows omitted)	2299
-3 Implausible value	0
-4 Inadmissible multiple response	0
-5 Not included in this version of the questionnaire	0
-6 Version of questionnaire with modified filtering	0
-7 Only available in less restricted edition	0
-8 Question this year not part of survey	0
-9 Missing due to a terminated interview	0

## 5 Texts

Smartphone sensing data is aggregated to track the number of text messages sent per ESM episode as well as the aggregated count of typed characters within these text messages. Only texts typed in various communication apps are taken into account. Texts typed into search or navigation bars within those apps have been excluded. SMS texts were also not considered because of low occurrence.

### texts\_outgoing\_freq – Number of Texts Sent

---

0	1954
1	356
2	286
3	195
4	160
5	154
6	135
... (81 rows omitted)	1328
-3 Implausible value	0
-4 Inadmissible multiple response	0
-5 Not included in this version of the questionnaire	0
-6 Version of questionnaire with modified filtering	0
-7 Only available in less restricted edition	0
-8 Question this year not part of survey	0
-9 Missing due to a terminated interview	0

### texts\_outgoing\_length – Character Count of Texts Sent

---

0	1954
1	10
2	28
3	7
4	18
5	5
6	9
... (1226 rows omitted)	2537
-3 Implausible value	0
-4 Inadmissible multiple response	0
-5 Not included in this version of the questionnaire	0
-6 Version of questionnaire with modified filtering	0
-7 Only available in less restricted edition	0
-8 Question this year not part of survey	0
-9 Missing due to a terminated interview	0

## 6 App Usage

Smartphone sensing data is aggregated on a daily level to track participants' usage of different apps per ESM episode. This includes continuous tracking of the frequency of opening an

app and the time period using each app. Smartphone sensing starts after setup of the PhoneStudy app and is active until the app is uninstalled. App usage duration times are given in minutes. For more details on the app categorization procedure, see Schoedel et al. (2022). This enabled us to categorize 93.58% of all app usage events and 31.33% of all apps ever used in the sample.

### comm\_app\_freq – Communication Apps: Frequency

---

0	250
1	65
2	56
3	70
4	81
5	94
6	105
... (173 rows omitted)	3847
-3 Implausible value	0
-4 Inadmissible multiple response	0
-5 Not included in this version of the questionnaire	0
-6 Version of questionnaire with modified filtering	0
-7 Only available in less restricted edition	0
-8 Question this year not part of survey	0
-9 Missing due to a terminated interview	0

Schoedel, R., Oldemeier, M., Bonauer, L., & Sust, L. (2022). Systematic categorisation of 3,091 smartphone applications from a large-scale smartphone sensing dataset. *Journal of Open Psychology Data*, 10(1), 7. <https://doi.org/10.5334/jopd.59>

### comm\_app\_time – Communication Apps: Duration

---

0	250
0.0000500003496805827	1
0.000166670481363932	1
0.00280000368754069	1
0.00291666984558105	1
0.00449999968210856	1
0.00631666580835978	1
... (4306 rows omitted)	4312
-3 Implausible value	0
-4 Inadmissible multiple response	0
-5 Not included in this version of the questionnaire	0
-6 Version of questionnaire with modified filtering	0
-7 Only available in less restricted edition	0
-8 Question this year not part of survey	0
-9 Missing due to a terminated interview	0

**socmed\_app\_freq** – Social Media Apps: Frequency

---

0	2305
1	135
2	171
3	159
4	123
5	117
6	94
... (101 rows omitted)	1464
-3 Implausible value	0
-4 Inadmissible multiple response	0
-5 Not included in this version of the questionnaire	0
-6 Version of questionnaire with modified filtering	0
-7 Only available in less restricted edition	0
-8 Question this year not part of survey	0
-9 Missing due to a terminated interview	0

**socmed\_app\_time** – Social Media Apps: Duration

---

0	2305
0.0000166654586791992	2
0.0000333348910013835	3
0.0000499963760375977	1
0.0000500003496805827	2
0.0000666697820027669	1
0.0000833312670389811	1
... (2245 rows omitted)	2253
-3 Implausible value	0
-4 Inadmissible multiple response	0
-5 Not included in this version of the questionnaire	0
-6 Version of questionnaire with modified filtering	0
-7 Only available in less restricted edition	0
-8 Question this year not part of survey	0
-9 Missing due to a terminated interview	0

**audio\_app\_freq** – Audio Entertainment Apps: Frequency

---

0	3505
1	145
2	132
3	108
4	80
5	74
6	64
... (49 rows omitted)	460
-3 Implausible value	0

-4	Inadmissible multiple response	0
-5	Not included in this version of the questionnaire	0
-6	Version of questionnaire with modified filtering	0
-7	Only available in less restricted edition	0
-8	Question this year not part of survey	0
-9	Missing due to a terminated interview	0

### audio\_app\_time – Audio Entertainment Apps: Duration

---

0		3505
0.0000166654586791992		2
0.0000166694323221842		1
0.0000333309173583984		2
0.0000333348910013835		3
0.0000333388646443685		1
0.0000500003496805827		2
...	(1043 rows omitted)	1052
-3	Implausible value	0
-4	Inadmissible multiple response	0
-5	Not included in this version of the questionnaire	0
-6	Version of questionnaire with modified filtering	0
-7	Only available in less restricted edition	0
-8	Question this year not part of survey	0
-9	Missing due to a terminated interview	0

### career\_app\_freq – Career Apps: Frequency

---

0	4376	
1	30	
2	37	
3	19	
4	24	
5	10	
6	10	
...	(26 rows omitted)	62
-3	Implausible value	0
-4	Inadmissible multiple response	0
-5	Not included in this version of the questionnaire	0
-6	Version of questionnaire with modified filtering	0
-7	Only available in less restricted edition	0
-8	Question this year not part of survey	0
-9	Missing due to a terminated interview	0

### career\_app\_time – Career Apps: Duration

---

0	4376
0.0000166654586791992	2
0.0000333309173583984	2
0.0000500003496805827	2
0.0000666658083597819	2
0.0000666697820027669	1
0.0000833352406819662	1
... (176 rows omitted)	182
-3 Implausible value	0
-4 Inadmissible multiple response	0
-5 Not included in this version of the questionnaire	0
-6 Version of questionnaire with modified filtering	0
-7 Only available in less restricted edition	0
-8 Question this year not part of survey	0
-9 Missing due to a terminated interview	0

### create\_app\_freq – Creativity Apps: Frequency

---

0	4525
1	12
2	1
3	3
4	2
5	1
6	1
... (14 rows omitted)	23
-3 Implausible value	0
-4 Inadmissible multiple response	0
-5 Not included in this version of the questionnaire	0
-6 Version of questionnaire with modified filtering	0
-7 Only available in less restricted edition	0
-8 Question this year not part of survey	0
-9 Missing due to a terminated interview	0

### create\_app\_time – Creativity Apps: Duration

---

0	4525
0.0000499963760375977	1
0.0222833355267843	1
0.0269000013669332	1
0.0307500084241231	1
0.0390833338101705	1
0.0774499972661336	1
... (31 rows omitted)	37
-3 Implausible value	0
-4 Inadmissible multiple response	0
-5 Not included in this version of the questionnaire	0

-6	Version of questionnaire with modified filtering	0
-7	Only available in less restricted edition	0
-8	Question this year not part of survey	0
-9	Missing due to a terminated interview	0

### dating\_app\_freq – Dating Apps: Frequency

---

0	4439	
1	12	
2	17	
3	18	
4	10	
5	12	
6	6	
...	(26 rows omitted)	
-3	Implausible value	0
-4	Inadmissible multiple response	0
-5	Not included in this version of the questionnaire	0
-6	Version of questionnaire with modified filtering	0
-7	Only available in less restricted edition	0
-8	Question this year not part of survey	0
-9	Missing due to a terminated interview	0

### dating\_app\_time – Dating Apps: Duration

---

0	4439	
0.0000333309173583984	1	
0.000150001049041748	1	
0.0507333318392436	1	
0.0667999982833862	1	
0.0673166632652283	1	
0.0706000049908956	1	
...	(117 rows omitted)	
-3	Implausible value	0
-4	Inadmissible multiple response	0
-5	Not included in this version of the questionnaire	0
-6	Version of questionnaire with modified filtering	0
-7	Only available in less restricted edition	0
-8	Question this year not part of survey	0
-9	Missing due to a terminated interview	0

### finance\_app\_freq – Finance Apps: Frequency

---

0	3199
1	356

2	267
3	183
4	117
5	78
6	64
... (31 rows omitted)	304
-3 Implausible value	0
-4 Inadmissible multiple response	0
-5 Not included in this version of the questionnaire	0
-6 Version of questionnaire with modified filtering	0
-7 Only available in less restricted edition	0
-8 Question this year not part of survey	0
-9 Missing due to a terminated interview	0

### finance\_app\_time - Finance Apps: Duration

---

0	3199
0.0000166694323221842	2
0.0000333309173583984	6
0.0000333348910013835	5
0.0000333388646443685	2
0.0000500003496805827	3
0.0000500043233235677	1
... (1333 rows omitted)	1350
-3 Implausible value	0
-4 Inadmissible multiple response	0
-5 Not included in this version of the questionnaire	0
-6 Version of questionnaire with modified filtering	0
-7 Only available in less restricted edition	0
-8 Question this year not part of survey	0
-9 Missing due to a terminated interview	0

### food\_app\_freq - Food Apps: Frequency

---

0	4052
1	116
2	107
3	73
4	62
5	26
6	32
... (19 rows omitted)	100
-3 Implausible value	0
-4 Inadmissible multiple response	0
-5 Not included in this version of the questionnaire	0
-6 Version of questionnaire with modified filtering	0
-7 Only available in less restricted edition	0

-8	Question this year not part of survey	0
-9	Missing due to a terminated interview	0

### food\_app\_time – Food Apps: Duration

---

0		4052
0.0000166654586791992		1
0.0000166694323221842		1
0.0000333309173583984		1
0.0000333348910013835		2
0.0000500003496805827		2
0.0000666658083597819		2
...	(501 rows omitted)	507
-3	Implausible value	0
-4	Inadmissible multiple response	0
-5	Not included in this version of the questionnaire	0
-6	Version of questionnaire with modified filtering	0
-7	Only available in less restricted edition	0
-8	Question this year not part of survey	0
-9	Missing due to a terminated interview	0

### game\_app\_freq – Game Apps: Frequency

---

0		3646
1		118
2		98
3		84
4		76
5		59
6		50
...	(50 rows omitted)	437
-3	Implausible value	0
-4	Inadmissible multiple response	0
-5	Not included in this version of the questionnaire	0
-6	Version of questionnaire with modified filtering	0
-7	Only available in less restricted edition	0
-8	Question this year not part of survey	0
-9	Missing due to a terminated interview	0

### game\_app\_time – Game Apps: Duration

---

0		3646
0.0000166654586791992		3
0.0000333309173583984		2
0.0000333348910013835		1

0.0000500003496805827		3
0.0000666658083597819		2
0.0000666697820027669		1
...	(901 rows omitted)	910
-3	Implausible value	0
-4	Inadmissible multiple response	0
-5	Not included in this version of the questionnaire	0
-6	Version of questionnaire with modified filtering	0
-7	Only available in less restricted edition	0
-8	Question this year not part of survey	0
-9	Missing due to a terminated interview	0

### health\_app\_freq – Health Apps: Frequency

---

0		3246
1		501
2		268
3		149
4		84
5		59
6		43
...	(27 rows omitted)	218
-3	Implausible value	0
-4	Inadmissible multiple response	0
-5	Not included in this version of the questionnaire	0
-6	Version of questionnaire with modified filtering	0
-7	Only available in less restricted edition	0
-8	Question this year not part of survey	0
-9	Missing due to a terminated interview	0

### health\_app\_time – Health Apps: Duration

---

	0	3246
0.0000166654586791992		3
0.0000166694323221842		5
0.0000333309173583984		2
0.0000333348910013835		4
0.0000499963760375977		2
0.0000500003496805827		3
...	(1282 rows omitted)	1303
-3	Implausible value	0
-4	Inadmissible multiple response	0
-5	Not included in this version of the questionnaire	0
-6	Version of questionnaire with modified filtering	0
-7	Only available in less restricted edition	0
-8	Question this year not part of survey	0
-9	Missing due to a terminated interview	0

**internet\_app\_freq** – Internet Apps: Frequency

---

0	904
1	288
2	365
3	318
4	286
5	246
6	228
... (63 rows omitted)	1933
-3 Implausible value	0
-4 Inadmissible multiple response	0
-5 Not included in this version of the questionnaire	0
-6 Version of questionnaire with modified filtering	0
-7 Only available in less restricted edition	0
-8 Question this year not part of survey	0
-9 Missing due to a terminated interview	0

**internet\_app\_time** – Internet Apps: Duration

---

0	904
0.0000166654586791992	1
0.0000333348910013835	2
0.0000500003496805827	1
0.0000500043233235677	1
0.0000666658083597819	1
0.00016666507720947	1
... (3641 rows omitted)	3657
-3 Implausible value	0
-4 Inadmissible multiple response	0
-5 Not included in this version of the questionnaire	0
-6 Version of questionnaire with modified filtering	0
-7 Only available in less restricted edition	0
-8 Question this year not part of survey	0
-9 Missing due to a terminated interview	0

**know\_app\_freq** – Knowledge Apps: Frequency

---

0	4224
1	105
2	83
3	37
4	24
5	14

6	10
... (24 rows omitted)	71
-3 Implausible value	0
-4 Inadmissible multiple response	0
-5 Not included in this version of the questionnaire	0
-6 Version of questionnaire with modified filtering	0
-7 Only available in less restricted edition	0
-8 Question this year not part of survey	0
-9 Missing due to a terminated interview	0

### know\_app\_time - Knowledge Apps: Duration

---

0	4224
0.0000166654586791992	3
0.0000333309173583984	2
0.0000333348910013835	1
0.0000666618347167969	1
0.0000666697820027669	2
0.0000833352406819662	1
... (327 rows omitted)	334
-3 Implausible value	0
-4 Inadmissible multiple response	0
-5 Not included in this version of the questionnaire	0
-6 Version of questionnaire with modified filtering	0
-7 Only available in less restricted edition	0
-8 Question this year not part of survey	0
-9 Missing due to a terminated interview	0

### news\_app\_freq - News Apps: Frequency

---

0	3379
1	221
2	168
3	138
4	122
5	92
6	70
... (35 rows omitted)	378
-3 Implausible value	0
-4 Inadmissible multiple response	0
-5 Not included in this version of the questionnaire	0
-6 Version of questionnaire with modified filtering	0
-7 Only available in less restricted edition	0
-8 Question this year not part of survey	0
-9 Missing due to a terminated interview	0

**news\_app\_time** - News Apps: Duration

---

0	3379
0.0000166654586791992	14
0.0000166694323221842	5
0.0000333309173583984	8
0.0000333348910013835	6
0.0000333388646443685	2
0.0000499963760375977	1
... (1134 rows omitted)	1153
-3 Implausible value	0
-4 Inadmissible multiple response	0
-5 Not included in this version of the questionnaire	0
-6 Version of questionnaire with modified filtering	0
-7 Only available in less restricted edition	0
-8 Question this year not part of survey	0
-9 Missing due to a terminated interview	0

**orientat\_app\_freq** - Orientation Apps: Frequency

---

0	3393
1	296
2	302
3	131
4	104
5	62
6	53
... (31 rows omitted)	227
-3 Implausible value	0
-4 Inadmissible multiple response	0
-5 Not included in this version of the questionnaire	0
-6 Version of questionnaire with modified filtering	0
-7 Only available in less restricted edition	0
-8 Question this year not part of survey	0
-9 Missing due to a terminated interview	0

**orientat\_app\_time** - Orientation Apps: Duration

---

0	3393
0.0000166654586791992	6
0.0000166694323221842	4
0.0000333309173583984	3
0.0000333348910013835	2
0.0000333388646443685	1
0.0000500003496805827	5
... (1140 rows omitted)	1154
-3 Implausible value	0

-4	Inadmissible multiple response	0
-5	Not included in this version of the questionnaire	0
-6	Version of questionnaire with modified filtering	0
-7	Only available in less restricted edition	0
-8	Question this year not part of survey	0
-9	Missing due to a terminated interview	0

### photo\_app\_freq – Photography Apps: Frequency

---

0	2056	
1	434	
2	365	
3	256	
4	234	
5	168	
6	137	
... (63 rows omitted)	918	
-3	Implausible value	0
-4	Inadmissible multiple response	0
-5	Not included in this version of the questionnaire	0
-6	Version of questionnaire with modified filtering	0
-7	Only available in less restricted edition	0
-8	Question this year not part of survey	0
-9	Missing due to a terminated interview	0

### photo\_app\_time – Photography Apps: Duration

---

0	2056	
0.0000166654586791992	4	
0.0000166694323221842	1	
0.0000333309173583984	2	
0.0000333348910013835	1	
0.0000499963760375977	3	
0.0000500003496805827	1	
... (2458 rows omitted)	2500	
-3	Implausible value	0
-4	Inadmissible multiple response	0
-5	Not included in this version of the questionnaire	0
-6	Version of questionnaire with modified filtering	0
-7	Only available in less restricted edition	0
-8	Question this year not part of survey	0
-9	Missing due to a terminated interview	0

### read\_app\_freq – Reading Apps: Frequency

---

0	4505
1	10
2	12
3	5
4	6
5	5
6	5
... (9 rows omitted)	20
-3 Implausible value	0
-4 Inadmissible multiple response	0
-5 Not included in this version of the questionnaire	0
-6 Version of questionnaire with modified filtering	0
-7 Only available in less restricted edition	0
-8 Question this year not part of survey	0
-9 Missing due to a terminated interview	0

### read\_app\_time – Reading Apps: Duration

---

0	4505
0.0000166654586791992	1
0.000983333587646484	1
0.00105000336964925	1
0.0027999997138977	1
0.0273333350817362	1
0.0339833339055379	1
... (50 rows omitted)	57
-3 Implausible value	0
-4 Inadmissible multiple response	0
-5 Not included in this version of the questionnaire	0
-6 Version of questionnaire with modified filtering	0
-7 Only available in less restricted edition	0
-8 Question this year not part of survey	0
-9 Missing due to a terminated interview	0

### security\_app\_freq – Security Apps: Frequency

---

0	3721
1	372
2	159
3	70
4	35
5	19
6	21
... (48 rows omitted)	171
-3 Implausible value	0
-4 Inadmissible multiple response	0
-5 Not included in this version of the questionnaire	0

-6	Version of questionnaire with modified filtering	0
-7	Only available in less restricted edition	0
-8	Question this year not part of survey	0
-9	Missing due to a terminated interview	0

### security\_app\_time – Security Apps: Duration

---

0		3721
0.0000166654586791992		4
0.0000166694323221842		1
0.0000333309173583984		1
0.0000333348910013835		2
0.0000499963760375977		1
0.0000500043233235677		2
...	(795 rows omitted)	836
-3	Implausible value	0
-4	Inadmissible multiple response	0
-5	Not included in this version of the questionnaire	0
-6	Version of questionnaire with modified filtering	0
-7	Only available in less restricted edition	0
-8	Question this year not part of survey	0
-9	Missing due to a terminated interview	0

### settings\_app\_freq – Settings Apps: Frequency

---

0		2669
1		733
2		394
3		237
4		156
5		100
6		68
...	(28 rows omitted)	211
-3	Implausible value	0
-4	Inadmissible multiple response	0
-5	Not included in this version of the questionnaire	0
-6	Version of questionnaire with modified filtering	0
-7	Only available in less restricted edition	0
-8	Question this year not part of survey	0
-9	Missing due to a terminated interview	0

### settings\_app\_time – Settings Apps: Duration

---

0		2669
0.0000333309173583984		1

0.0000333348910013835		1
0.0000500043233235677		1
0.0000666658083597819		1
0.0000666697820027669		1
0.0000833312670389811		2
...	(1860 rows omitted)	1892
-3	Implausible value	0
-4	Inadmissible multiple response	0
-5	Not included in this version of the questionnaire	0
-6	Version of questionnaire with modified filtering	0
-7	Only available in less restricted edition	0
-8	Question this year not part of survey	0
-9	Missing due to a terminated interview	0

### shop\_app\_freq – Shopping Apps: Frequency

---

0		3176
1		214
2		247
3		178
4		112
5		96
6		87
...	(44 rows omitted)	458
-3	Implausible value	0
-4	Inadmissible multiple response	0
-5	Not included in this version of the questionnaire	0
-6	Version of questionnaire with modified filtering	0
-7	Only available in less restricted edition	0
-8	Question this year not part of survey	0
-9	Missing due to a terminated interview	0

### shop\_app\_time – Shopping Apps: Duration

---

0		3176
0.0000166654586791992		7
0.0000166694323221842		5
0.0000499963760375977		1
0.0000500003496805827		2
0.0000666658083597819		2
0.0000833312670389811		1
...	(1361 rows omitted)	1374
-3	Implausible value	0
-4	Inadmissible multiple response	0
-5	Not included in this version of the questionnaire	0
-6	Version of questionnaire with modified filtering	0
-7	Only available in less restricted edition	0

-8	Question this year not part of survey	0
-9	Missing due to a terminated interview	0

### spirit\_app\_freq – Spirituality Apps: Frequency

---

0		4533
1		16
3		3
4		5
5		2
9		1
-1	No answer	8
-2	Does not apply	0
-3	Implausible value	0
-4	Inadmissible multiple response	0
-5	Not included in this version of the questionnaire	0
-6	Version of questionnaire with modified filtering	0
-7	Only available in less restricted edition	0
-8	Question this year not part of survey	0
-9	Missing due to a terminated interview	0

### spirit\_app\_time – Spirituality Apps: Duration

---

0		4533
0.0721666653951009		1
0.0850333372751872		1
0.0904833316802978		1
0.0924166679382324		1
0.102050002415975		1
0.116249998410543		1
...	(23 rows omitted)	29
-3	Implausible value	0
-4	Inadmissible multiple response	0
-5	Not included in this version of the questionnaire	0
-6	Version of questionnaire with modified filtering	0
-7	Only available in less restricted edition	0
-8	Question this year not part of survey	0
-9	Missing due to a terminated interview	0

### time\_app\_freq – Time Apps: Frequency

---

0	2210
1	548
2	475
3	303

4	236
5	195
6	114
... (30 rows omitted)	487
-3 Implausible value	0
-4 Inadmissible multiple response	0
-5 Not included in this version of the questionnaire	0
-6 Version of questionnaire with modified filtering	0
-7 Only available in less restricted edition	0
-8 Question this year not part of survey	0
-9 Missing due to a terminated interview	0

### time\_app\_time – Time Apps: Duration

---

0	2210
0.0000166694323221842	1
0.0000333348910013835	1
0.00021666685740153	1
0.000266663233439128	1
0.000333333015441895	1
0.000366663932800293	1
... (2266 rows omitted)	2352
-3 Implausible value	0
-4 Inadmissible multiple response	0
-5 Not included in this version of the questionnaire	0
-6 Version of questionnaire with modified filtering	0
-7 Only available in less restricted edition	0
-8 Question this year not part of survey	0
-9 Missing due to a terminated interview	0

### tools\_app\_freq – Tools Apps: Frequency

---

0	1875
1	574
2	381
3	274
4	231
5	165
6	139
... (53 rows omitted)	929
-3 Implausible value	0
-4 Inadmissible multiple response	0
-5 Not included in this version of the questionnaire	0
-6 Version of questionnaire with modified filtering	0
-7 Only available in less restricted edition	0
-8 Question this year not part of survey	0
-9 Missing due to a terminated interview	0

**tools\_app\_time** – Tools Apps: Duration

---

0	1875
0.0000166654586791992	5
0.0000166694323221842	1
0.0000333309173583984	2
0.0000333348910013835	4
0.0000333388646443685	1
0.000049963760375977	4
... (2621 rows omitted)	2676
-3 Implausible value	0
-4 Inadmissible multiple response	0
-5 Not included in this version of the questionnaire	0
-6 Version of questionnaire with modified filtering	0
-7 Only available in less restricted edition	0
-8 Question this year not part of survey	0
-9 Missing due to a terminated interview	0

**transport\_app\_freq** – Transport Apps: Frequency

---

0	4190
1	82
2	78
3	43
4	27
5	31
6	23
... (29 rows omitted)	94
-3 Implausible value	0
-4 Inadmissible multiple response	0
-5 Not included in this version of the questionnaire	0
-6 Version of questionnaire with modified filtering	0
-7 Only available in less restricted edition	0
-8 Question this year not part of survey	0
-9 Missing due to a terminated interview	0

**transport\_app\_time** – Transport Apps: Duration

---

0	4190
0.0000166654586791992	3
0.0000333348910013835	2
0.000199989477793376	1
0.000200001398722331	1
0.000266663233439128	1

0.000466668605804443	1
... (362 rows omitted)	369
-3 Implausible value	0
-4 Inadmissible multiple response	0
-5 Not included in this version of the questionnaire	0
-6 Version of questionnaire with modified filtering	0
-7 Only available in less restricted edition	0
-8 Question this year not part of survey	0
-9 Missing due to a terminated interview	0

### visual\_app\_freq - Visual Entertainment Apps: Frequency

---

0	3239
1	254
2	277
3	190
4	117
5	96
6	46
... (37 rows omitted)	349
-3 Implausible value	0
-4 Inadmissible multiple response	0
-5 Not included in this version of the questionnaire	0
-6 Version of questionnaire with modified filtering	0
-7 Only available in less restricted edition	0
-8 Question this year not part of survey	0
-9 Missing due to a terminated interview	0

### visual\_app\_time - Visual Entertainment Apps: Duration

---

0	3239
0.0000166654586791992	9
0.0000166694323221842	5
0.0000333309173583984	4
0.0000333348910013835	4
0.0000333388646443685	1
0.0000499963760375977	2
... (1284 rows omitted)	1304
-3 Implausible value	0
-4 Inadmissible multiple response	0
-5 Not included in this version of the questionnaire	0
-6 Version of questionnaire with modified filtering	0
-7 Only available in less restricted edition	0
-8 Question this year not part of survey	0
-9 Missing due to a terminated interview	0

**weather\_app\_freq** – Weather Apps: Frequency

0	3699
1	364
2	208
3	92
4	59
5	39
6	33
... (16 rows omitted)	74
-3 Implausible value	0
-4 Inadmissible multiple response	0
-5 Not included in this version of the questionnaire	0
-6 Version of questionnaire with modified filtering	0
-7 Only available in less restricted edition	0
-8 Question this year not part of survey	0
-9 Missing due to a terminated interview	0

**weather\_app\_time** – Weather Apps: Duration

0	3699
0.0000166694323221842	1
0.0000333348910013835	1
0.0000499963760375977	1
0.0000500043233235677	1
0.0000833312670389811	1
0.0000833352406819662	2
... (848 rows omitted)	862
-3 Implausible value	0
-4 Inadmissible multiple response	0
-5 Not included in this version of the questionnaire	0
-6 Version of questionnaire with modified filtering	0
-7 Only available in less restricted edition	0
-8 Question this year not part of survey	0
-9 Missing due to a terminated interview	0

Schoedel, R., Oldemeier, M., Bonauer, L., & Sust, L. (2022). Systematic categorisation of 3,091 smartphone applications from a large-scale smartphone sensing dataset. *Journal of Open Psychology Data*, 10(1), 7.

<https://doi.org/10.5334/jopd.59>

## 7 Conversation Detection

Using the AWARE Conversation plugin from Ferreira & Mulukutla (2020), ambient audio signal around the smartphone was sampled following a cycle of one-minute sampling and three-minutes break. A privacy-protective algorithm inferred whether conversation prevailed

in ambient sound around the device (binary classification “noise/”voice” where “voice” indicates conversation). This information is used to compute the proportion of detected conversation samplings per ESM episode. In practice, the software sampled at lower rates on several devices, most likely because the operating system aborted the background process to conserve battery life. For more considerations on validity and reliability and comparison with self-report measures of in-person contact, see Roos et al. (2023).

### n\_aware – AWARE Conversations: Samplings

---

0	1550
1	41
2	16
3	7
4	5
5	3
6	4
... (478 rows omitted)	2942
-3 Implausible value	0
-4 Inadmissible multiple response	0
-5 Not included in this version of the questionnaire	0
-6 Version of questionnaire with modified filtering	0
-7 Only available in less restricted edition	0
-8 Question this year not part of survey	0
-9 Missing due to a terminated interview	0

Ferreira, D., & Mulukutla, R. (2020). *AWARE Plugin: Conversations*.

Retrieved from [https://github.com/denzilferreira/com.aware.plugin.studentlife.audio\\_final](https://github.com/denzilferreira/com.aware.plugin.studentlife.audio_final)

Roos, Y., Krämer, M. D., Richter, D., Schoedel, R., & Wrzus, C. (2023). Does Your Smartphone “Know” Your Social Life? A Methodological Comparison of Day Reconstruction, Experience Sampling, and Mobile Sensing. *Advances in Methods and Practices in Psychological Science*, 6(3), 1–12.

<https://doi.org/10.1177/25152459231178738>

### n\_voice – AWARE Conversations: Conv. Detected

---

0	2115
1	209
2	134
3	87
4	86
5	87
6	60
... (229 rows omitted)	1790
-3 Implausible value	0
-4 Inadmissible multiple response	0
-5 Not included in this version of the questionnaire	0
-6 Version of questionnaire with modified filtering	0
-7 Only available in less restricted edition	0

-8	Question this year not part of survey	0
-9	Missing due to a terminated interview	0

### prop\_voice – Proportion of Conversations

---

0		2115
0.00409836065573771		1
0.00416666666666667		1
0.00458715596330275		1
0.00460829493087558		1
0.00478468899521531		1
0.00485436893203883		1
...	(1864 rows omitted)	2447
-3	Implausible value	0
-4	Inadmissible multiple response	0
-5	Not included in this version of the questionnaire	0
-6	Version of questionnaire with modified filtering	0
-7	Only available in less restricted edition	0
-8	Question this year not part of survey	0
-9	Missing due to a terminated interview	0

This variable is computed by dividing n\_voice by n\_aware.

## 8 Device Status

From timestamped logs, the number of startup, shutdown and restart events of participant's smartphones per ESM episode were extracted. "Booting" events take startup and restart events into account.

### shutdown – Number of Shutdown Events

---

0		4504
1		54
2		9
3		1
-1	No answer	0
-2	Does not apply	0
-3	Implausible value	0
-4	Inadmissible multiple response	0
-5	Not included in this version of the questionnaire	0
-6	Version of questionnaire with modified filtering	0
-7	Only available in less restricted edition	0
-8	Question this year not part of survey	0
-9	Missing due to a terminated interview	0

**booted** – Number of Booting Events

---

0	4007
1	505
2	46
3	9
5	1
-1 No answer	0
-2 Does not apply	0
-3 Implausible value	0
-4 Inadmissible multiple response	0
-5 Not included in this version of the questionnaire	0
-6 Version of questionnaire with modified filtering	0
-7 Only available in less restricted edition	0
-8 Question this year not part of survey	0
-9 Missing due to a terminated interview	0

**9 Number Of Contact Entries**

From contact entry smartphone logs, the number of unique contact entries was extracted.

**unique\_numbers** – Number of Contacts

---

6	14
13	13
14	14
17	26
24	39
25	32
28	12
... (233 rows omitted)	4418
-3 Implausible value	0
-4 Inadmissible multiple response	0
-5 Not included in this version of the questionnaire	0
-6 Version of questionnaire with modified filtering	0
-7 Only available in less restricted edition	0
-8 Question this year not part of survey	0
-9 Missing due to a terminated interview	0