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IZA DP No. 14638

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ABSTRACT

The Effects of the COVID-19 Pandemic on the Mental Health and Subjective Well-Being of Workers: An Event Study Based on High-Frequency Panel Data*

Using individual monthly panel data from December 2018 to December 2020, we estimate the impact of the Covid-19 pandemic and two lockdowns on the mental health and subjective well-being of German workers. Employing an event-study design using individual-specific fixed effects, we find that the first and the second wave of the pandemic reduced workers' mental health substantially. Momentary happiness and life satisfaction also decline in response to Covid-19, but to a smaller extent. We observe adaptation in our study outcomes between waves of the pandemic. This applies to a lesser extent to indicators of well-being in certain areas of life, such as satisfaction with the job and with leisure, which are negatively affected, too. Women do not seem to suffer greater well-being losses than men. However, workers in the German short-time work scheme are particularly negatively affected. Our results imply that increased anxiety about the future and restricted personal freedoms are among the drivers of the well-being impact of the pandemic.

JEL Classification: I31, I19

Keywords: Covid-19, life satisfaction, depression, affective well-being, app-based survey data, German Job Search Panel

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1. Introduction

Covid-19 has changed life drastically. Since its outbreak in China at the end of 2019, the virus has rapidly spread across the globe. The pandemic forced governments to introduce unprecedented restrictions to people's private and working lives, with a dramatic economic impact. As a result of these events, the effects of the pandemic on individual mental health and quality of life have been of great concern right from the beginning of the outbreak (e.g., Layard et al., 2020; Brodeur et al., 2021). What is more, with multiple Covid waves over several years, the question arises as to whether the pandemic will lead to lasting reductions in well-being. Using novel monthly data of German workers from 2019 and 2020, we estimate the evolution of well-being over one year of the pandemic. In the process, we examine whether people return to pre-pandemic levels of well-being after infections rise and decline, and curbs are introduced and lifted. On this basis, we also study whether workers experience the second wave of the pandemic as more or less harmful than the first wave.

A unique feature of the dataset is that it includes a wide array of measures of well-being, such as mental health, life satisfaction and momentary happiness (the latter two are sometimes also jointly referred to as subjective well-being). The literature often deals with these measures separately, as they matter for different reasons. Mental disorders come at a high monetary cost, for instance in terms of health care and workers being absent (Dahmann & Schnitzlein, 2019). This cost will increase to the extent that the pandemic takes its toll on people's mental health. Life satisfaction and experienced mood are often employed as empirical measures of individual welfare where behaviour is unobservable, deemed irrational, or if the event under consideration is not subject to people's choices (e.g. Odermatt & Stutzer, 2018). This makes the Covid-19 pandemic a prime example for the economic study of subjective well-being, with the ultimate purpose of comprehensively assessing the welfare consequences of the pandemic and associated policy measures.

Conceptually, mental health and subjective well-being are closely linked. Mental health is a "state of well-being in which an individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and is able to make a contribution to his or her community" (WHO, 2018). Subjective well-being is based on how people experience their lives, through either cognitive life evaluation (e.g. life satisfaction) or their affective state (e.g. moods and emotions, Diener, 2000). Therefore, emotional experience and sometimes life evaluation are among the indicators used to assess a person's mental health. When it comes to a shock that affects life globally, such as the Covid-19 pandemic, we therefore expect similar effects on these three concepts of well-being and thus examine them alongside each other.

In addition, we aim at revealing potential reasons for well-being effects of the pandemic in various ways. We study in which areas of life well-being effects of the pandemic are particularly concentrated by estimating those effects in context-specific domains of life evaluation (satisfaction with job, family life, leisure and household chores). The study of mood assessments is extended to restlessness and sleepiness. Finally, specific subgropus are analyzed.

The focus of our study is on workers up to the age of 60, who are at a lower risk of dying from Covid-19 relative to older adults, unless they suffer from underlying health conditions (which applies to about a quarter of our sample). While at lower risk of ill-health, the working population is strongly affected by lockdown measures. The economic impact puts workers' careers and hence future incomes at stake. Multiple disruptions influence their working lives, including working from home and accelerated digitization. Working parents additionally need to cope with increased care responsibilities if schools and kindergartens close. Generally, these impacts are expected to affect women more than men, as the former bear the brunt of both labor market shocks and caring responsibilities (Alon et al., 2021; Hupkau & Petrongolo, 2020). Therefore, female mental health and subjective well-being in particular might be affected.

Similar to other European countries, the first infection in Germany was recorded at the end of January 2020. In February, the pandemic started to spread exponentially, leading to extensive restrictions in March that were unparalleled in German history (Naumann et al., 2020). To cushion the effects of the lockdown, generous fiscal policy measures were enacted, such as extensions of short-time work subsidies (*Kurzarbeit*) and comprehensive financial support for businesses. After infections peaked in April, numbers fell until July. Many restrictions, but not all, were lifted. A second wave started in October 2020 at the latest, with renewed restrictions in place from 2 November 2020 onwards. In December, infections spiked again, leading to even tighter restrictions.

A distinguishing feature of our analysis is the use of a novel monthly dataset from December 2018 to December 2020, collected via a smartphone app. This allows us to estimate an individual pre-pandemic level of well-being as a baseline (2019 average), smoothing out short-term changes of well-being. The pre-pandmemic data are also used to control for seasonal effects. The baseline level is compared to the evolution of well-being during the first wave and the start of the second wave of Covid-19, as well as in between. Furthermore, monthly observations enable us to compare well-being closely around crucial events, such as the start of the first lockdown. In addition, we examine prospective well-being effects at times of rising infection rates preceding the introduction of lockdown measures.

Our analyses identify negative effects of the first two waves of the pandemic on mental health. Between these waves, workers' mental health returned to pre-pandemic levels. Life satisfaction also responded negatively to Covid-19 outbreaks and lockdowns, but the effect is small and limited to a few weeks around the start of the first lockdown. Similar to mental health, momentary happiness responded negatively to both waves of the pandemic, with a period of adaptation in between. When it comes to specific areas of life, we find the most pronounced negative effects in job satisfaction and leisure satisfaction. Lower infection rates and partly lifted restrictions over the summer of 2020 are not accompanied by adaptation in job satisfaction and by only partial adaptation in leisure satisfaction. Across the board, we do not find any significant differences between men and women. Also, being at a relatively high risk of a severe illness from Covid-19 does not exacerbate the well-being impact of the pandemic in our sample.

However, we observe that people working fewer hours as their employers make use of the German *Kurzarbeit* scheme show stronger negative effects across indicators of well-being. In connection with other findings, this implies that anxiety about the future explains some part of the well-being effects. Short-time work might signal employees that their job security is at stake, given that employers use short-time work to cushion their losses in times of crisis, without having to lay off workers immediately. As the measure is temporary, there is a risk that it only delays job losses. Beyond that, the fact that we see relatively few subgroup differences leads to the conclusion that restrictions of personal freedoms which affect everyone (e.g. contact restrictions) play a part in explaining the impact of the pandemic on well-being.

We proceed as follows. Section 2 reviews the literature on the well-being impact of Covid-19, including our contributions and theoretical considerations. The data are described in Section 3. Section 4 introduces the event-study design and empirical model. Section 5 presents and discusses the results. Section 6 concludes.

2. Previous literature and theoretical considerations

2.1 Covid 19, well-being and issues of causal identification

The few existing studies on the well-being effects of past epidemics, in particular when it comes to indirect effects on non-infected individuals, point to negative effects on various indicators of well-being and quality of life (e.g., Bults et al., 2011; Lau et al., 2008; Thompson et al., 2017). In the course of the Covid-19 pandemic, this literature has grown rapidly.[1] Most surveys on the well-being impact of Covid-19 started during the first wave of the pandemic, often with lockdown restrictions already being in place (e.g., Newby et al., 2020; Vindegaard & Benros, 2020). While these studies deliver valuable insights into the evolution of measures of well-being after the outbreak of Covid-19, they usually lack pre-event measures and thus do not allow us to draw conclusions about the impact of the pandemic itself. Several studies try to resolve this issue by comparing samples of people surveyed before the outbreak with similar samples surveyed afterwards (repeated cross-sections). On this basis, Pierce et al. (2020) as well as Niedzwiedz et al. (2020) find negative mental health effects of the pandemic in Britain and so do Sibley et al. (2020) for New Zealand. This is further corroborated by the findings of Anaya et al. (2021), who exploit the daily variation in interview dates in a large UK survey around the time of the first wave of the pandemic. The negative mental health effects found are stronger in women than in men. In particular, migrants and people with childcare responsibilities also suffer.

[1] Some studies use previously collected data to simulate well-being outcomes of the pandemic. For instance, based on time use patterns and the value of togetherness, Hamermesh (2020) predicts some mitigation of negative satisfaction effects of the pandemic for couples.

Samples of respondents drawn before the pandemic may not be comparable to samples drawn after the start of the pandemic. Anaya et al. (2021) address this issue by using a regression discontinuity design, with the interview date as the running variable, assuming that the interview date is randomly distributed around the start of the first lockdown in the UK. This is combined with a difference-in-difference design comparing differences in mental health between people interviewed from March 2019 to May 2019 and people interviewed between March 2020 and May 2020. A similar approach is presented by Brodeur et al. (2021). They use country-level data from Google search queries and employ a regression discontinuity design around the first wave of the pandemic. They find searches for worry, sadness and loneliness to have increased due to the pandemic in Western Europe and the US. While these results cannot be used to quantify effects of the pandemic on indicators of well-being, they, too, are indicative of a negative causal impact of the pandemic on mental health and affective well-being.

Panel data allow for the analysis of how changes affect the same persons over time, and thus circumvent bias from stable characteristics which are particularly important for well-being (Ferrer-i-Carbonell & Frijters, 2004; Lykken & Tellegen, 1996). Only a few studies have so far presented evidence based on such panel data. Focusing on the first two months of the first lockdown in the UK, Banks and Xu (2020) document a negative mental health effect of the pandemic compared to predicted levels of mental health based on previous waves of panel survey data. Kivi et al. (2020) find stable life satisfaction for older Swedish adults and, somewhat surprisingly, improvements of self-rated health and financial satisfaction. Similarly, Recchi et al. (2020) show an increase in experiential well-being for France and higher levels of self-rated health during lockdown compared to previous years. An issue in these studies is that the pre-event measures of well-being stem from at least one year before the first surge of cases in the respective countries. Hence, other events and time trends between the beginning of 2019 and the beginning of 2020 could have biased their results.

There are also studies with smaller time lags between the pre-pandemic measure of well-being and the Covid-19 outbreak. They tend to paint a less positive picture. Zacher and Rudolph (2021) reveal negative effects of the pandemic on measures of both evaluative and experiential indicators of well-being in Germany, based on a panel survey with four waves covering the timespan from December 2019 to May 2020. They find no significant changes in life satisfaction, positive affect, and negative affect before March 2020, but a negative development afterwards. For Germany, Möhring et al. (2021) analyse job satisfaction and family life satisfaction surveyed in September 2019 and April 2020. Their first-difference regressions (comparing these two dates) point to a general decrease in both family life and job satisfaction. In a similar study for the UK, Pelly et al. (2021) compare data of the same workers from around the turn of the year 2019/2020 with data from May/June 2020. They find no negative effects of the pandemic on well-being.

Studies relying on two close time points before and after the pandemic limit the bias from other changes and trends, but they need to assume that the pre-pandemic level of well-being is a person's normal level of well-being and thus undistorted from any idiosyncratic effects at the pre-pandemic comparison point in time (an election, Christmas, or any other seasonal event). Previously mentioned panel studies with

long time lags of one year but several pre-pandemic time points from previous years are able to better predict a baseline level of well-being as comparison point.

2.2 Contributions

Our study complements the previous literature on Covid-19 and indicators of well-being in at least three important ways. First, monthly panel data over 2019 and 2020 are used to better identify effects of the pandemic. On this basis, we are able to compare well-being during the pandemic relative to a within-person reference level of well-being that smooths out any short-term changes and facilitates controlling for seasonal effects. In addition, monthly observations of the same workers allow us to zoom in on changes in well-being around the crucial events of the pandemic, when the first cases are observed in Germany and when the first lockdown is introduced. We can identify whether well-being returns to pre-pandemic levels when restrictions are lifted after the first lockdown and whether the start of the second wave of Covid-19 in Germany in the fall of 2020 affects well-being similarly to the first wave. In contrast, previous studies focus on the first wave of the pandemic only.

Second, we consider well-being globally examining life satisfaction, momentary happiness and a measure of mental health based on the same sample. In addition, we separately analyze various domains of life satisfaction (with the job, with family life, with leisure and with household chores) and the different moods happy, calm and awake (as well as their negative counterparts). This allows us to shed light on both global and specific impacts of the pandemic.

A third contribution is our focus on workers. They are potentially more affected than other groups because of pandemic-induced labor market shocks, working from home and closures of schools and kindergartens (e.g. Botha et al., 2021; Immel et al., 2021). What is more, the workers in our sample experienced a labor market shock in the last three years before the pandemic. They might thus be more susceptible to the well-being effects of amplified uncertainty about their future employment prospects in the wake of the pandemic. In addition, we are able to specifically examine the well-being effects on workers who are subject to Germany's short-time work scheme aimed at preventing job losses. In the process, we complement other literature analyzing the impacts of the pandemic on specific groups, such as parents/mothers, children, or university students (e.g. Baron et al., 2020; Giuntella et al., 2021; Huebener et al., 2021; Takaku & Yokoyama, 2021). At the same time, the focus on workers who experienced a labor market shock prior to Covid-19 is a limitation of our study as our results are not necessarily representative of the whole (working) population.

2.3 Theoretical considerations

The literature reviewed here and elsewhere overwhelmingly describe the mental health impact of Covid-19 as negative (Banks et al., 2021). Building on the previous literature, we expect the mental health impact of the pandemic to be negative, too. Covid-19 has fundamentally changed the working life of

many and the private lives of everyone. While some workers might enjoy working from home and commuting less, everyone is impacted by the general consequences of the pandemic, such as the threat to physical health, social distancing, increased future uncertainty and a lack of personal freedom (Pérez-Fuentes et al., 2020; Konrad & Simon, 2021). On balance, it therefore seems most plausible to that life satisfaction and momentary happiness decline as a result of the pandemic, too, even though the literature is smaller and less clear when it comes to these outcomes. Hence, for all of our global measures of well-being (mental health, life satisfaction, momentary happiness), we expect that, on average, the Covid-19 pandemic has a negative effect.

As mentioned before, a particular contribution of our study is the ability to examine well-being over the course of the first two waves of the pandemic. Previous literature on other life events and measures of well-being often point to the pattern of adaptation (e.g., Luhmann et al, 2012). People get used to even severe changes in life, such as widowhood, divorce, or disability, at least to some extent. They tend to return to a set-point level of well-being which is determined by genetic disposition and early-childhood experience, whether the life event increased or decreased subjective well-being (e.g. Diener et al., 2006; Lucas, 2007; Frijters et al., 2011). Between the waves of the pandemic, the health threat declined and restrictions were lifted. Therefore, *observed* adapation might simply reflect the return to normal life. However, life did not completely return to what was perceived as normal before the pandemic and the principle risk of a Covid-19 infection remained. Complete adaptation may therefore also reflect the habitual convergence of well-being to its set point. We expect that, overall, well-being returns to pre-pandemic levels once infections decline and curbs are lifted.

According to set-point theory, adaptation does not require that the exposure to the event ends, i.e. even during a lasting pandemic well-being levels could recover from the first shock. Therefore, one might expect smaller well-being effects from the second wave of Covid-19 than from the first wave. While the first wave meant unprecedented changes in life, the consequences of another wave are already familiar. Based on this we expect that the second wave of the pandemic has smaller well-being effects than the first wave.

However, people do not adapt to all life events. A notable exception is unemployment, which yields long-lasting changes in well-being (e.g. Clark et al., 2008). People do not fully recover even if they overcome joblessness (‘scarring effect’, e.g. Clark et al., 2001; Knabe & Rätzel, 2011; Hetschko et al., 2019). If the pandemic were to be a life event of this kind, even with a return to normal life, well-being would not fully recover. Moreover, there is the pattern of sensitization that makes the repeated experience of some events even more harmful, as Luhmann and Eid (2009) show, again, for unemployment. This means that the second wave might be even more harmful than the first wave. Furthermore, there were more reported Covid-19 cases in the second wave than in the first wave in Germany, which might have led to a stronger perception of health and economic risks.

3. Methods

3.1 The German Job Search Panel

In this study, we make use of the German Job Search Panel (GJSP, see Hetschko et al., 2020 for a detailed account). The data collection was initially aimed at measuring the impact of job search on various indicators of well-being using high-frequency panel data. The recruitment of participants started at the end of 2017 and lasted until May 2019. We contacted individuals of ages 18 to 60 who had registered as *employed* job seekers with the German Federal Employment Agency in advance of the (expected) termination of their employment. Once people had signed up for the survey, they completed monthly questionnaires ideally over a period of two years. People typically dropped out of the panel survey within three months after sign-up or continued to participate for many months. After the third wave of the panel, participation rates were rather stable (Hetschko et al., 2020).

When the pandemic hit at the beginning of 2020, most participants were in employment, despite having been recruited initially at a time when they expected to lose or terminate their jobs.[2] This has two main reasons. First, many workers are still uncertain whether they will actually become unemployed when they register as employed job seekers. For instance, fixed-term contracts are often prolonged or made permanent at short notice. In other cases, companies that seem bound to close survive at the last minute. In consequence, around half of all jobseeker registrations do not result in actual unemployment (Stephan, 2016). Second, before the pandemic, unemployment was low in Germany, which is why many people were able to find a new job quickly, even if they lost work. As a result, the data facilitate a study on the impact of the pandemic on employees. A sensitivity check will later rely on employed individuals only.

The GJSP oversamples people who registered as job seekers as they expected to lose work in the wake of a mass layoff or plant closure (33 % of respondents who still participated in March and April 2020). These events usually affect a large variety of people, irrespective of socio-demographic characteristics and job attributes, since they are beyond the control of the individual worker who is affected. This limits the extent of sample selectivity. As shown in a sensitivity analysis below, our results for a subsample of people who initially registered as job seekers between 2017 and 2019 due to a mass layoff or plant closure do not differ qualitatively from the results obtained for the main sample.

Participants in the GJSP were interviewed using a smartphone app that they needed to install on their personal devices upon signing up. Contacted job seekers who did not have a smartphone but wanted to participate could borrow a device from the survey institute. We employed a version of the 'Happiness Analyzer' that was adjusted to the purposes of the GJSP (Ludwigs and Erdtmann, 2019). The app runs on both Android and iOS, covering about 95 % of the operating systems running on smartphones in

[2] 83 % of respondents who participated in March and April 2020 were full-time or part-time employed or self-employed, while 7 % were registered as unemployed and 3 % as job seekers in training. The remaining 7 % included other non-employment activities.

Germany at the time of recruitment (Hetschko et al., 2020). Apps are a flexible, convenient and cost-effective way of surveying people at high frequency. A disadvantage is sample selectivity, which can, however, also result from general differences in the willingness to participate in surveys. Compared to the contacted population of workers, actual participants were more often highly educated, younger and more often female. We control for these characteristics throughout. The average absolute non-response bias across these and other characteristics was less than 4 % (Hetschko et al., 2020).

Given that the recruitment of participants for the two-year panel study stopped in May 2019, many respondents were not observed in, or throughout, 2020 anymore. We only kept observations of workers in the sample who were observed at least once after the start of the first lockdown in Germany (March and April 2020). In a sensitivity check, we additionally required people to be observed during the second wave of Covid-19. Note that the GJSP is still running with participants newly recruited after the first wave of the pandemic. However, these participants are not part of this study.

3.2 Study outcomes

Mental health was measured using a short German version (ADS-K, Hautzinger et al., 2012) of the Center of Epidemiological Studies Depression Scale ('CES-D', Radloff, 1977). The measurement of mental health is not standardized, but the CES-D is commonly used as an inverse measure for this purpose (Breedvelt et al., 2020). The short version of the scale comprises 15 items on how often subjects experienced feelings of failure, strain, anxiety, problems with sleep and concentration, and the like, over the course of the previous week. Here, four-point scales ranging from '0' not at all / rarely (less than 1 day) to '1' sometimes (for 1 or 2 days), '2' often (for 3 or 4 days) or '3' mostly/always (5 to 7 days) were used.[3] Note that this translated wording of the German version of the scale differs somewhat from the original scale. People's indications were calculated as the average of responses to these 15 items, provided that they answered at least eight items of the scale.[4] In the following, we will also refer to this measure as a depression score.

Life evaluation was measured using the Satisfaction With Life Scale (Diener et al., 1985). This involved subjects indicating on seven-point scales whether they agreed with the statements that (1) their life is close to their ideals, (2) the conditions of their life are excellent, (3) they are satisfied with their life, (4) they have gotten the things they want in life and (5) they would change almost nothing if they could live their life over. The life satisfaction of an individual was calculated as the average of the responses to the five statements. In addition, people were asked about their satisfaction with specific domains of life, including their job, leisure, family life and household chores. These one-item measures cover scales from 0 to 10.

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[3] In addition, participants could indicate the option "I don't know". This was recoded as a missing value.

[4] See Table A 1 in the Appendix for a full description of the items.

Unlike other survey modes, apps facilitate assessing people's momentary happiness using the 'gold standard' Experience Sampling Method (ESM). The ESM does not suffer from recall biases, since subjects indicate their current activity and feelings in real time (Hektner et al., 2007; Kahneman & Krueger, 2006; Luhmann et al., 2012). GJSP participants were contacted at six random points in time on one day of each month via pop-up notifications integrated in the app. They were then given 15 minutes (and after a reminder another 15 minutes) to complete a short version of the Multidimensional Mood State Questionnaire (Steyer et al., 1997). This questionnaire contains the moods happy/unhappy, calm/restless and awake/sleepy, indicated on five-point scales. Provided that respondents completed at least three episodes of the same day, we calculated the person's daily averages of each mood. Happy/unhappy are used in this study as measures of momentary happiness, with the qualification that a longer list of emotions and moods would draw a more comprehensive picture of experiential well-being. The moods calm/restless and awake/sleepy allow us to obtain further insight into the impact of Covid-19 into worker well-being.

To facilitate comparisons across study outcomes despite different scales of measurement, we transformed all the individual (i) ratings of indicators of well-being (S) into *POMP* scores ('percentage of maximum possible') which range from 0 to 100 (Cohen et al., 1999):

$$(1) \qquad POMP_{S,i} = \frac{Value_{S,i} - Min_S}{Max_S - Min_S} \cdot 100$$

Table A 2 in the Online Appendix presents the means, standard deviations and quartiles of the analyzed outcome variables at the time of the first lockdown and for the period before the pandemic on which the reference level of well-being is based in our study.

3.3 Further information used in the analyses

In our analysis we include gender, the level of education, being single (as opposed to people who have a partner, whether they are married or not) and children living in the same household. Our data also enable us to distinguish between employment (either dependent or self-employed), unemployment, people taking part in active labor market policy schemes and other states. Net monthly household income is defined in brackets of thousand euro (< 1,000; 1,000-2,000; 2,000-3,000; 4,000-5,000; > 5,000).

Participants of the GJSP are asked to indicate underlying health conditions, including the degree of severity. Subjects choose from a list of diseases, such as diabetes, cardiovascular disease, asthma or cancer, but also skin disorders, and many more. They can also mention a disease that they could not find on the list. We consider as 'Covid-19 risk group' those who indicate to have at least one of the following diseases at medium level severity: cardiovascular disease, asthma or respiratory distress, cancer, diabetes, gallbladder, liver, or kidney disease. This corresponds to the group of people who have, according to information from the German federal public health institute, an increased risk of a severe course of Covid-19 (Robert Koch Institut, 2021a). Obese respondents are also considered at risk (body mass index of at least 30). Obesity was known to exacerbate Covid-19 early on (Deng et al., 2020).

Table 1 describes the sample at the time of the first lockdown. More than half of the sample is female. Around a quarter belongs to the age group 30-34 and three-quarters live in a partnership. Nearly 1 in 4 respondents are part of the Covid-19 risk group. For more than half of the sample, the household net income falls into the range of 1000 to 3000 euro.

Table 1: Descriptive Statistics

	Share
Gender	
Female	0.54
Male	0.46
Diverse	0.00
Age	
[19, 24]	0.03
[25, 30]	0.13
[30, 34]	0.24
[35, 39]	0.14
[40, 44]	0.12
[45, 49]	0.11
[50, 54]	0.14
[55, 60]	0.08
Age missing	0.01
Partner or married	0.76
Children in household	0.36
Covid-19 risk group	0.24
Highest level of education	
No occupational degree	0.03
Occupational degree	0.45
University degree	0.51
Household Income	
below 1,000 euro	0.05
1,000 - 2,000 euro	0.30
2,000 - 3,000 euro	0.28
3,000 - 4,000 euro	0.17
4,000 - 5,000 euro	0.12
≥ 5,000 Euro	0.09
Employment status	
Employed	0.83
Registered as unemployed	0.07
Registered as job-seeker and in training	0.03
Other	0.07
Mass layoff / plant closure sample	0.33
Month of survey participation	
[0, 6)	0.00
[6, 12)	0.20
[12,18)	0.61
[18, 25]	0.19
Number of observations at $t = 0$	658

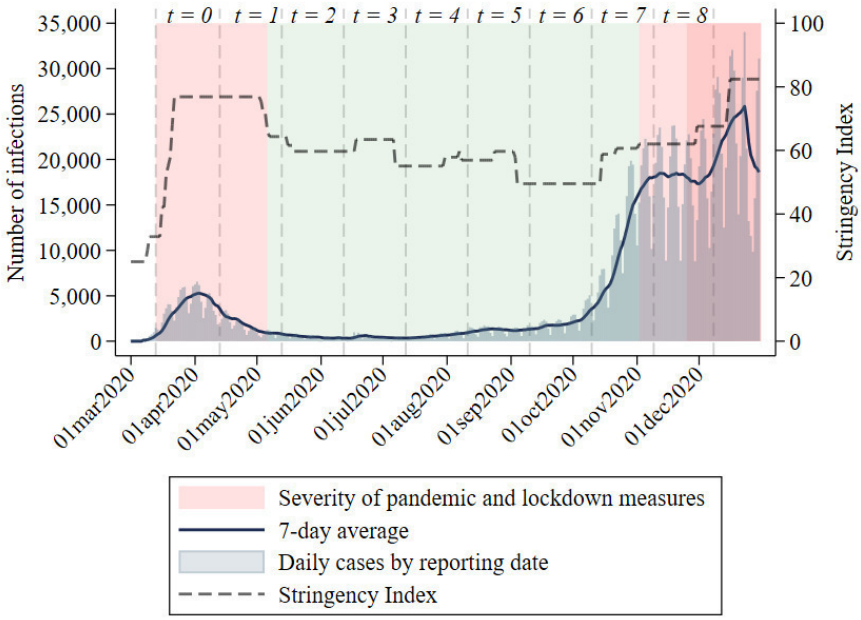
Note: Table shows descriptive statistics for individuals who responded to life satisfaction items between March 13, 2020 and April 12, 2020 ('$t = 0$').

4. Event study

4.1 Timeline

We set the starting time of the event to the day of the nationwide closures of schools and kindergartens on 13 March 2020. Large-scale events had already been cancelled three days earlier. Curfews, contact restrictions, closures of hospitality businesses, non-essential retail as well as close contact services (e.g. hairdressers) followed within days. People were advised to work from home where possible. The first individual interview within 30 days of 12 March 2020 is considered as the observation at the time of the event ($t = 0$). The interview within 30 days before that date is, therefore, the last pre-event measure ($t = -1$). We consider all the observations of workers in 2019 until the start of lockdown to control for metereological seasons (i.e., from $t = -15$ on). After the month of the event, our data cover eight further 30-day intervals (until $t = 8$), thus including the start of the second wave in late fall 2020. Table A 3 in the Online Appendix gives an account of the days covered by each time period. Figure 1 depicts the evolution of Covid-19 in Germany in 2020.

Figure 1: Daily infections and lockdown restrictions during the Covid-19 pandemic in Germany (2020)



Source*:* infas 360 GmbH and Robert Koch Institut (2021); Hale et al. (2021).

Note: The figure displays the daily number of Covid-19 infections according to their reporting date as well as the average number of reported infections over the last seven days. The stringency index captures the degree of closure and containment measures in place (see Hale et al., 2021). Based on this, the shaded area depicts the severity of the pandemic and corresponding lockdown measures during each time interval. Red indicates a period with a high number of infections and sharp restrictions, while green marks a period in which many restrictions are partly lifted due to a low number of infections.

According to the Robert Koch Institut (2021b), the number of daily deaths remained relatively low during the first wave of the pandemic. The seven-day average peaked at about 250 per day, as compared to about 900 per day at the peak of the later waves in Germany (January 2021). By July 2020 (at the start of $t = 4$), infections had reached a low-point with under 400 cases per day (seven-day average). Many restrictions had been lifted by then. Exceptions included the requirement to wear face coverings in certain situations (e.g. public transport, stores, supermarkets) and limitations on large-scale events (such as 50 guests for weddings). In addition, virtual university teaching continued.

The low point in case numbers in July 2020 was followed by a long period of slow growth reaching about 2,000 infections on 1 October. Then, the number of cases soared and only leveled off at 18,000-20,000 in mid-November (i.e, the turn from $t = 7$ to $t = 8$). On 2 November 2020, Germany tightened Covid-19 restrictions again. Hospitality and close contact service businesses, as well as cinemas and theatres, had to close.

In December 2020, i.e. at the end of $t = 8$ and thus our investigation period, Germany saw another surge of cases. Schools and nurseries had to close again and tighter limits on private gatherings were introduced. The ultimate peak of 25,000 cases a day around the turn of the year is not covered anymore in our analysis due to low numbers of observations.

4.2 Empirical model

We estimate the effect of the first wave of the pandemic ($t = 0$, $t = 1$) and the start of the second wave ($t = 6$ to $t = 8$), and the corresponding restrictions, on the well-being of workers using an event-study design, controlling for individual-specific fixed effects. To this end, our outcomes are estimated conditional on the point in time around the event (monthly lags and leads, from $TIME_{i,t=-2}$ to $TIME_{i,t=8}$). In the process, we cover prospective effects from the time when the first cases where detected ($TIME_{i,t=-2}$) in Germany and the first wave took off ($TIME_{i,t=-1}$). Furthermore, we are able to examine potential adaptation between the first two waves and the start of the second wave ($t = 2$ to $t = 5$). The $\text{TIME}_{i,t}$ variables are coded as dummy variables and take the value 1 during the specified time interval (e. g., $t = 0$) and 0 otherwise.

In the absence of an unaffected control group, the choice of the counterfactual level of well-being is less straightforward. We rely, roughly speaking, on the 2019 level of well-being as the reference level, i.e. the well-being between $t = -15$ and $t = -3$, i.e. the monthly average across all available observations from mid-December 2018 to mid-January 2020. As we also consider an individual-specific fixed effect (α_i), the reference level of well-being is the intraindividual well-being average over that period of time.

We estimate the following equation:

$$
\begin{aligned}
(2) \qquad POMP_{S,i,t} = {} & \beta_{-2} TIME_{i,t=-2} + \beta_{-1} TIME_{i,t=-1} + \beta_0 TIME_{i,t=0} \\
& + \beta_1 TIME_{i,t=1} + \ldots + \beta_8 TIME_{i,t=8} + \boldsymbol{X_{i,t}}' \gamma + \alpha_i + \varepsilon_{i,t}
\end{aligned}
$$

$POMP_{S,i,t}$ represents our different outcome measures S of individual i at time t. Vector $\boldsymbol{X}$ contains several covariates. We control for being part of the Covid-19 risk group, having a partner, living with children, being employed (also includes part-time employment or self-employed), registered as unemployed, registered as job seeking and in training and other employment states, having (no) occupational degree or having a university degree, and income brackets (five categories, with 1,000 to 2,000 euro as the reference category). To control for the weather and other seasonal effects, we consider the meteorological seasons as binary variables. Some people are observed in the early state of participating in the GJSP, in particular during the early months of our panel (until mid-2019 or $t = -7$). Hence, job search might affect and bias their level of well-being. Therefore, we also separately control for being observed in the first three months, or first year, of GJSP participation.

5. Results

5.1 Global measures of mental health, life evaluation and experiential happiness

We start with the ratings of our global measures of mental health (CES-D), life evaluation (Satisfaction With Life Scale), and experiential happiness (momentary mood happy/unhappy). Figure 2 depicts the results. At $t = -2$ and $t = -1$, i.e. in the month preceding the first lockdown, our inverse measure of mental health, the CES depression score (upper left panel of Figure 2) is significantly increased relative to the intraindividual average from the turn of the year 2018/2019 to January 2020. That being said, the effect sizes of $t = -2$ and $t = -1$ are small. They correspond to about 10 % and 9 % of the standard deviation in the sample (see Table A 2 in the Online Appendix). This does not seem to be a seasonal effect over the winter, as the metereological seasons are controlled for, and additional analyses (not reported) did not indicate an increase in CES-D for $t = -3$. It seems more plausible that we see prospective effects of the pandemic at the time when the first cases emerged in Germany ($t = -2$) and the virus spread quickly on the eve of lockdown ($t = -1$).[5] Interestingly, some of the items of the CES-D respond more strongly than others (see Table A 5 in the Online Appendix): "I was bothered by things that usually don't bother me", "I had trouble keeping my mind on what I was doing" and "I enjoyed life" (coded in reverse).

At the start of the first lockdown, $t = 0$, the depression score peaks at six points above the baseline, which is about 28 % of the standard deviation of that baseline in the sample. This initial increase is followed by a gradual decline until $t = 4$. Here, people indicate scores in line with their pre-pandemic average. This is line with both previous literature and theoretical considerations (Section 2.3): the impact of the first wave of Covid-19 is negative, but much of this negative impact also dissipates again when

[5] The first cases had received extensive media attention. During $t = -2$ the pandemic became the dominant topic in the German media (Degen, 2021). In addition, as we document in Figure A 1 in the Appendix, Google searches for 'coronavirus', 'SARS' and 'Wuhan' in Germany soared during $t = -2$ and $t = -1$.

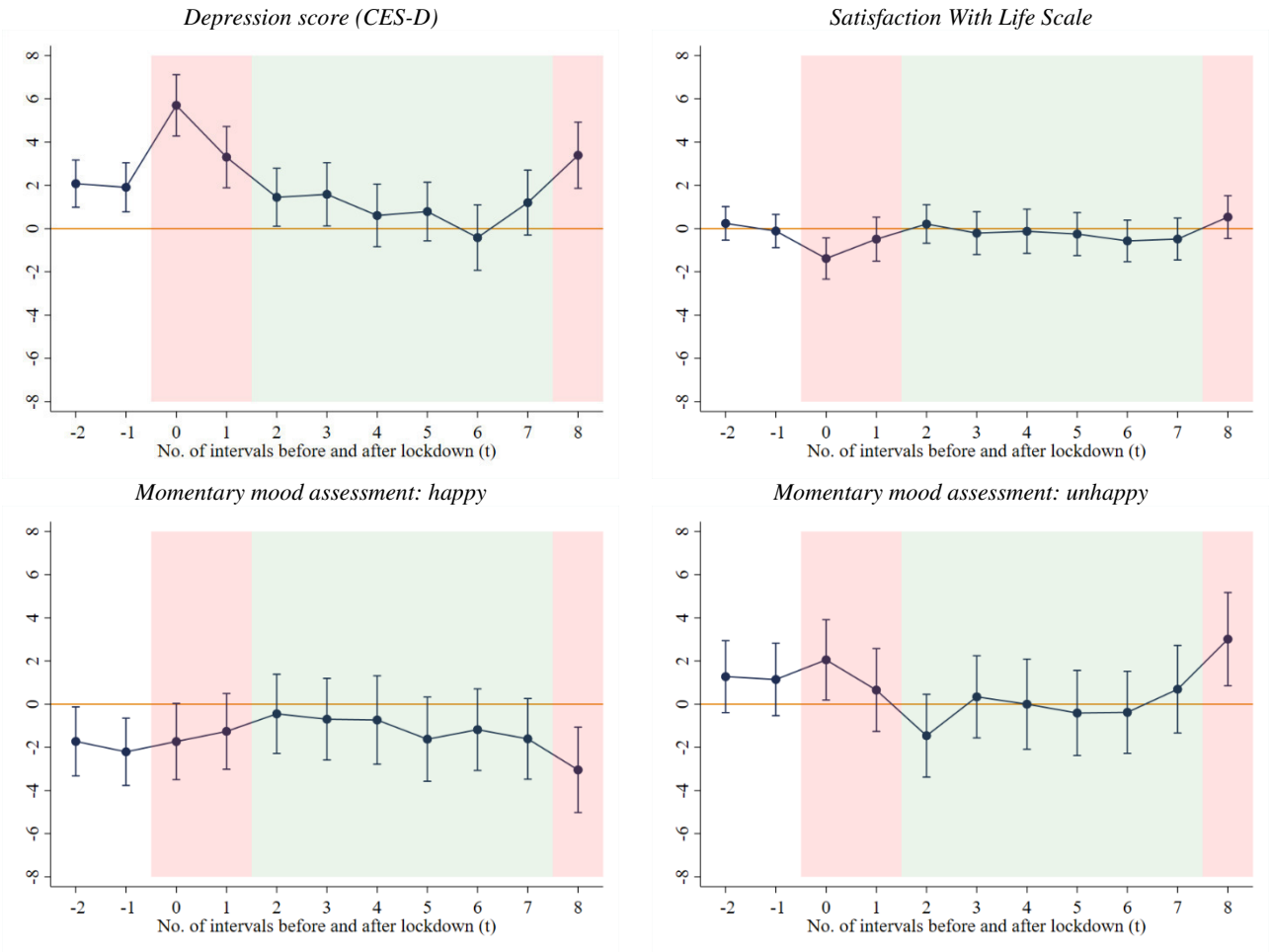
infection rates fall and restrictions are lifted. With the start of the second wave of the pandemic, the depression score increases again, but not up to the level of the first wave. However, our investigation period does not cover the whole second wave which is why this result needs to be interpreted with caution.

The effects we find in life satisfaction are less pronounced (upper right panel of Figure 2). Only for the first lockdown month ($t = 0$) do we see a significant but small drop of 1.4 points (which corresponds to about 7 % of the standard deviation during the reference level of well-being). After rapid adaptation, we do not observe another statistically significant decrease in life satisfaction at the start of the second wave. While this is in line with our expectation, the main finding is that the pandemic hardly affected workers' cognitive evaluation of their lives. As we additionally show in Table A 6 in the Online Appendix, the life satisfaction effect is even limited to the first two weeks of lockdown.

We also obtain negative effects on experienced happiness over the two months before lockdown, during the first lockdown month and when the second wave takes off (lower panel of Figure 2, sometimes the statistical significance is only at the 10 % level). The decline in happiness at $t = 0$ corresponds to about 9 % of the standard deviation, while unhappiness increases by about 10 % of the standard deviation. The prospective effects observed at times of rising infections but before restrictions are tightened are in line with the finding for mental health. Similar to life satisfaction, the negative effect in momentary happiness during the first lockdown dissipates after the first two weeks in lockdown (see Table A 7 and Table A 8 in the Online Appendix).

Between the two waves of the pandemic, workers seemed to enjoy their daily life as much as before Covid-19. Compared to mental health and life satisfaction, the effects are less precisely estimated due to a somewhat smaller number of observations (see Table A 2 in the Online Appendix). Recall that we required people to indicate momentary happiness for at least three time points over the course of a single day. Overall, the observed negative effects of the pandemic on momentary happiness and the adaptation between waves is in line with our expectations. However, an interesting finding is that in contrast to mental health and life satisfaction, the effect of the second wave on momentary happiness is not significantly different from that of the first wave.

Figure 2: Worker well-being during the Covid-19 pandemic



Note: The figure displays individual-specific fixed effects estimates of mental health, life satisfaction and momentary happiness for the two months before the first lockdown in Germany, the month of the first lockdown ($t = 0$) and the following eight months. The orange line depicts the intraindividual average of the respective outcome from 19 December 2018 to 12 January 2020. The shaded area depicts the severity of the pandemic and lockdown measures in place during this time interval. Red indicates a period with a high number of infections and sharp restrictions, while green marks a period in which many restrictions are partly lifted due to a low number of infections. Binary control variables include being part of the Covid-19 risk group, children living in the same household, having a partner or being married, income brackets, the employment states unemployed, job seeker in training, and other, the meteorological seasons, being observed within the first three months of GJSP participation, and in the first year of GJSP participation, educational attainment. The full list of results are reported in Table A 4, Table A 6, Table A 7 and Table A 8 (Column 1) in the Appendix. Whiskers denote 95 % confidence intervals.

We should not expect much variation in our covariates within the same workers over an investigation period of only 23 months. Nevertheless, the covariate effects are often in line with previous literature (Table A 4 to Table A 8 in the Online Appendix). Income is positively related to life satisfaction, but not to momentary happiness and mental health (cf. Kahneman & Deaton, 2010; Apouey & Clark, 2015). Life satisfaction and mental health decrease with being at risk of severe Covid-19 (i.e., being in poor physical health, see, e.g., Lucas, 2007; Ohrnberger et al., 2017). Unlike momentary happiness, life sat-

isfaction is lower when workers are unemployed (e.g. Knabe et al., 2010). Somewhat surprisingly, however, unemployment does not seem to negatively correlate with mental health, in contrast to the findings by, for instance, Cygan-Rehm et al. (2017). However, this should be interpreted with caution, since the variation in the employment status is rather low.

The results of our sensitivity analyses are displayed in Figure A 2 to A 5 in the Online Appendix. We estimate our empirical model again for the presumably more representative subsample of people who started participation in the GJSP between 2017 and 2019 due to a mass layoff, since mass layoffs in general affect a large variety of people irrespective of their individual characteristcs. None of the estimates deviates significantly from those based on the main sample. Sometimes effects seem to be a little more or a little less pronounced in the subsample but given its smaller size they are also less precisely estimated. To ensure that changes in employment status do not bias the effects, another robustness check, presented in Figure A 2 to A 5, is based on the subsample of employed individuals. The effects are practically the same as those in the whole sample. The final sensitivity analysis excludes observations from the main sample that are no longer observed during the second wave of Covid-19 at t = 8. The idea is to rule out that selective attrition distorts the comparison of effects over time. This does not seem to be the case as this sensitivity analysis also produces results that are in the range of the main estimation (see, again, Figure A 2 to A 5).

5.2 Satisfaction with life domains, restlessness, and sleep

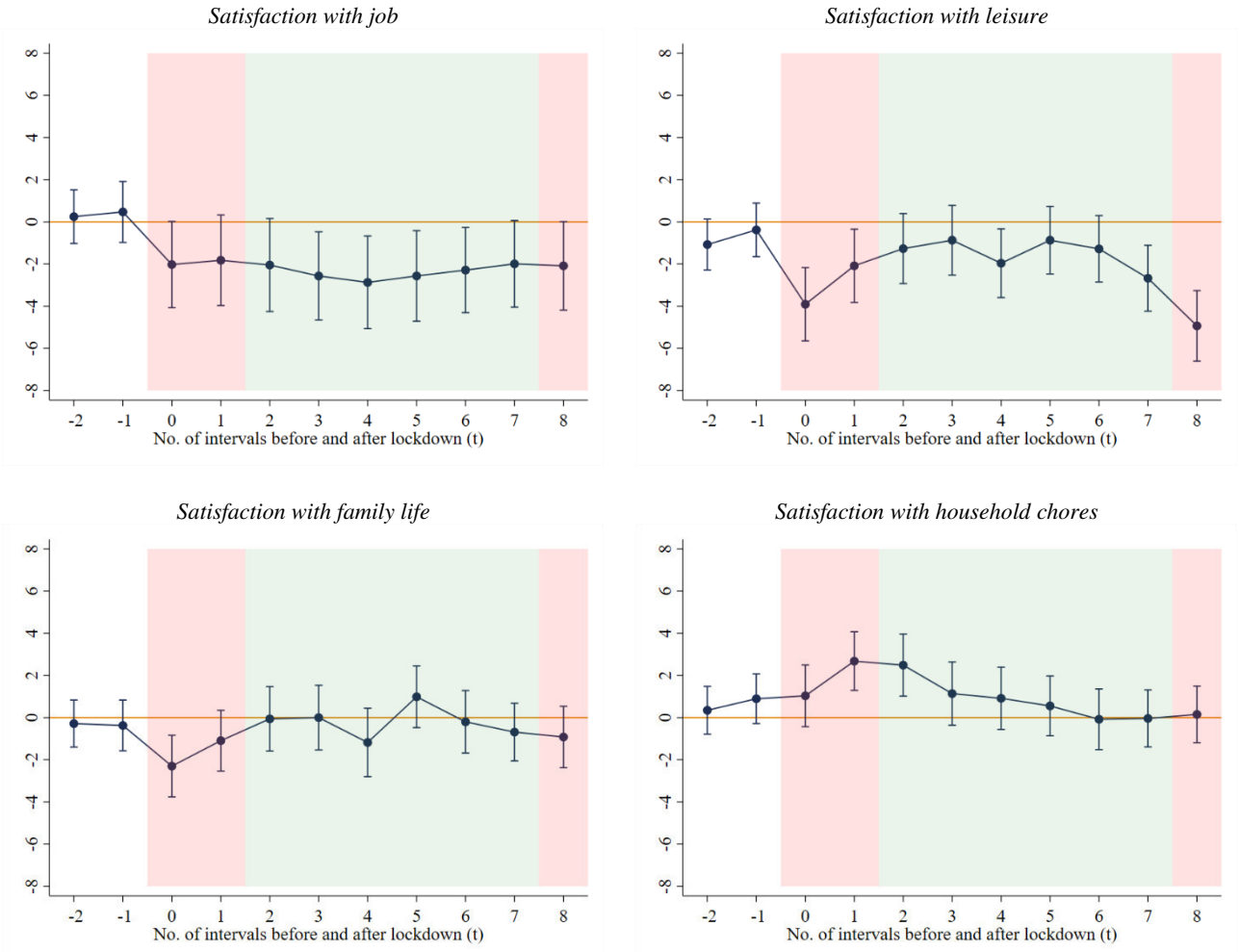
Next, we turn to evaluative well-being with regards to certain areas of life, namely job, family life, leisure, and household chores. We start with job satisfaction, and thus an area of life where Covid-19 brought about manifold changes, such as uncertainty about future employment stability, working from home, digitization and being furloughed (or, in Germany, *Kurzarbeit*, see our discussion below). As Figure 3 shows (upper left panel), the overall impact of the pandemic on job satisfaction seems to be negative. At $t = 0$, job satisfaction is reduced by approximately 9 % of the standard deviation. While a reduction of 2 to 3 points does not seem large, we see no adaptation over time, i.e. the negative impact is lasting. This could be due to the fact that changes in working life continued for many even between the waves of the pandemic.

The pandemic also had an impact on the ways people could spend their leisure time, with social distancing, contact restrictions and the closures of restaurants, shops and cultural venues. Not surprisingly, leisure satisfaction declined during the first lockdown and the second lockdown (by roughly 4 points each, upper right panel of Figure 3). The decline during the first wave corresponds to about 18 % of the standard deviation. Between the two waves of the pandemic, we observe partial adaptation. Many freetime activities were made possible again, if only under restrictions, but large-scale concerts, for instance, continued to be banned. Travel abroad was also much more difficult than in previous years.

Another area of life that was expected to be negatively affected by lockdowns is family life. For one, home schooling presents a massive challenge to working parents. What is more, visiting relatives living

in a different household, different region or care home was limited during the lockdowns. As shown in the lower left panel of Figure 3, satisfaction with family life evolves in a similar way to overall life satisfaction over the course of the pandemic, with only a small and temporary drop during the first lockdown (about 10 % of the standard deviation) and no significant deviations from pre-pandemic levels of well-being thereafter.

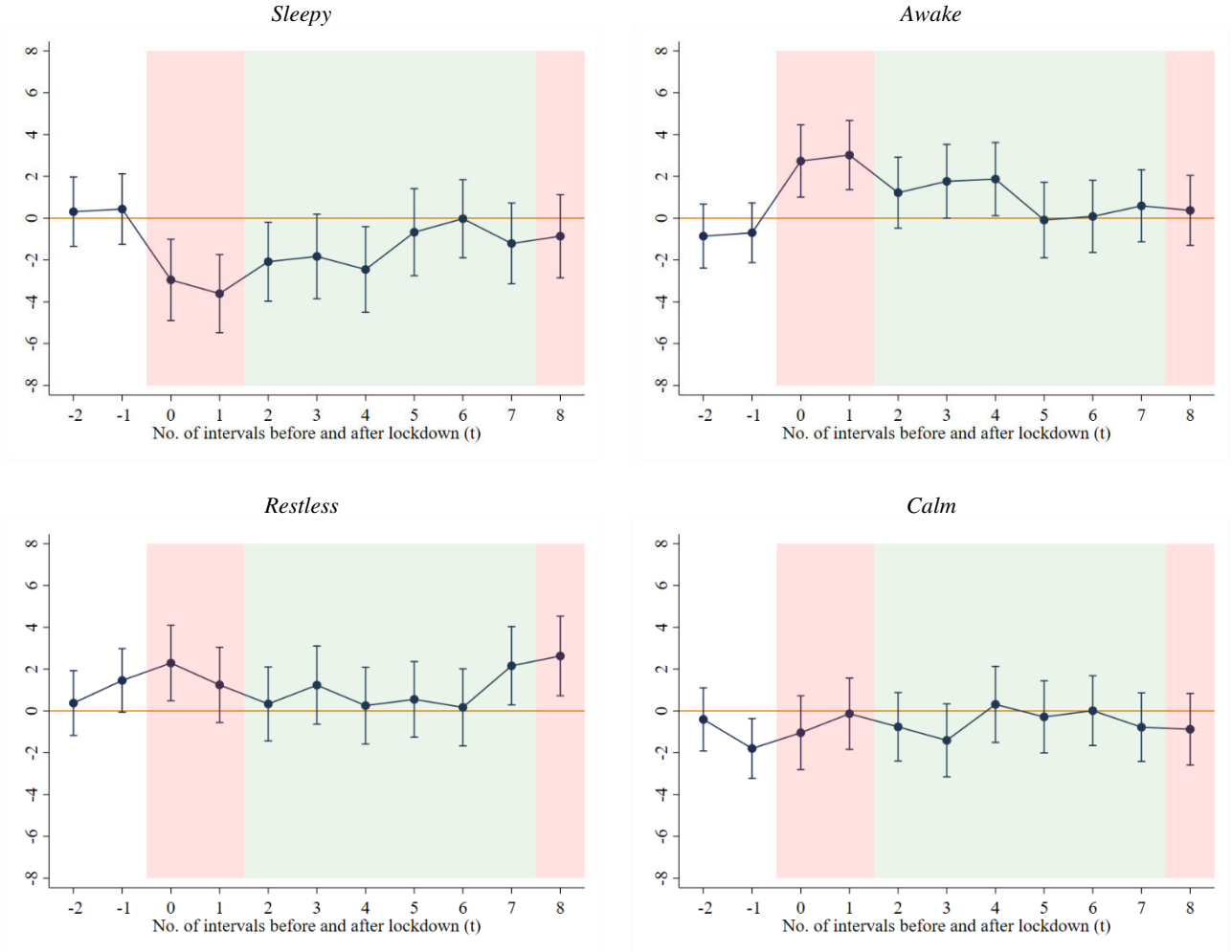
Figure 3: Satisfaction with certain areas of life during the Covid-19 pandemic



Note: The figure displays individual-specific fixed effects estimates of domains of life satisfaction for the two months before the first lockdown in Germany, the month of the first lockdown ($t = 0$) and the following eight months. The orange line depicts the itindividual average of the respective outcome from 19 December 2018 to 12 January 2020. The shaded area depicts the severity of the pandemic and lockdown measures in place during this time interval. Red indicates a period with a high number of infections and sharp restrictions, while green marks a period in which many restrictions are partly lifted due to a low number of infections. Binary control variables include being part of the Covid-19 risk group, children living in the same household, having a partner or being married, income brackets, the employment states unemployed, job seeker in training, and other, the meteorological seasons, being observed within the first three months of GJSP participation, and in the first year of GJSP participation, educational attainment. The full list of results are reported in Table A 9, Table A 10, Table A 11 and Table A 12 (Column 1) in the Appendix. Whiskers denote 95 % confidence intervals.

Domestic work is the last area of life we are able to examine more closely. Interestingly, we observe a positive development over the course of the pandemic, in particular one to two months after the first lockdown began ($t = 1$, $t = 2$). An interpretation could be that a reduction in the marginal utility of leisure time (due to the lower quality of leisure as a result of restrictions to private life), saved commuting time and reduced hours initiated a shift of focus onto domestic work (refurbishments, repairs, gardening). However, this effect seems to be limited to the first wave of the pandemic.

Figure 4: Mood assessments of sleepy/awake and restlessness/calm during the Covid-19 pandemic



Note: The figure displays individual-specific fixed effects estimates of momentary mood effects for the two months before the first lockdown in Germany, the month of the first lockdown ($t = 0$) and the following eight months. The orange line depicts the intraindividual average of the respective outcome from 19 December 2018 to 12 January 2020. The shaded area depicts the severity of the pandemic and lockdown measures in place during this time interval. Red indicates a period with a high number of infections and sharp restrictions, while green marks a period in which many restrictions are partly lifted due to a low number of infections. Binary control variables include being part of the Covid-19 risk group, children living in the same household, having a partner or being married, income brackets, the employment states unemployed, job seeker in training, and other, the meteorological seasons, being observed within the first three months of GJSP participation, and in the first year of GJSP participation, educational attainment. The full list of results are reported in Table A 13, Table A 14, Table A 15 and Table A 16 (Column 1) in the Appendix. Whiskers denote 95 % confidence intervals.

We cast further light on the multiple impacts of the pandemic using additional mood assessments, namely sleepy/awake (upper panel of Figure 4) and restless/calm (lower panel of Figure 4). In line with the idea that restrictions to private life and working life free up time, people feel less sleepy (more awake) during and after the first lockdown. The effect at $t = 0$ corresponds to about 13 % of the standard deviation for sleepy and 14 % for awake respectively. In contrast, restlessness increases during both waves of the pandemic as soon as infections rise and not only with the introduction of curbs (lower panel of Figure 4). Between the waves of the pandemic, restlessness returns to pre-pandemic levels. This is in line with the idea that anxiety plays a role in the well-being impact of the pandemic (e.g. concerns about health and future incomes). At first glance, the results on sleepy and restless almost seem to contradict each other, as anxiety usually yields sleep problems. However, they might be driven by different subgroups of workers, in line with heterogenous changes of sleep patterns during Covid-19 found by Hisler and Twenge (2021) for the US. Perhaps for the same reason, the effects found in restlessness are not fully mirrored by calmness. While restlessness increases by about 11 % of the standard deviation during the first month of lockdown ($t = 0$), calmness decreases only by about 5 % of the standard deviation.

5.3 Differences between subgroups of workers

In order to derive policy implications for firms and society as a whole, it is crucial to identify groups of workers that are especially affected by the pandemic and thus in need of support. To this end, we estimate interaction variables of subgroups (vector $\boldsymbol{Group}$), which are elements of vector $\boldsymbol{X}$, with the two waves of the pandemic (represented by the time variables $t = 0$ and $t = 8$):

$$
\begin{aligned}
POMP_{S,i,t} = {} & \beta_{-2} TIME_{i,t=-2} + \beta_{-1} TIME_{i,t=-1} \\
& + \beta_0 TIME_{i,t=0} + (TIME_{i,t=0} \times \boldsymbol{Group_{i,t=0}})' \pi \\
& + \beta_1 TIME_{i,t=1} + \ldots + \beta_8 TIME_{i,t=8} + (TIME_{i,t=8} \times \boldsymbol{Group_{i,t=8}})' \rho \\
& + \boldsymbol{X_{i,t}}' \gamma + \alpha_i + \varepsilon_{i,t}
\end{aligned}
\tag{3}
$$

It should be kept in mind that comparing different groups of workers requires substantial numbers of observations in these groups, which limits our ability to provide in-depth subgroup analyses. The following results therefore provide starting points for future investigations, not conclusive assessments.

The impact of Covid-19 on women and their mental health has been of great concern over the course of the pandemic. Female-dominated industries bear the brunt of the economic effects of restrictions, which makes women more likely than men to lose work or work fewer hours and experience a reduction of income (Alon et al., 2021). Increased childcare responsibilities may also impact women in particular (Sevilla & Smith, 2020). Nevertheless, we find no significant gender differences in the impact of the pandemic on mental health, life satisfaction, satisfaction with areas of life and momentary happiness, unlike other studies (Table A 4 to Table A 16 in the Online Appendix, e.g., Anaya et al., 2021; Beland et al., 2021; Hupkau & Petrongolo, 2020; Takaku & Yokoyama 2021). Restlessness seems to be more

pronounced in women relative to men in the first month of the first lockdown. Interestingly, the opposite is true for the second lockdown (Table A 15).[6]

Our sample size does not allow us to reasonably combine gender and parental status where, for instance, Zoch et al. (2021) find women to be more negatively affected than men in terms of life satisfaction. At least we can distinguish between workers living in households with and without children. We do not find that the former suffer more from the pandemic than the latter, in contrast to results obtained by Cheng et al. (2021) for the UK. In fact, workers with children in the household suffer smaller declines in leisure satisfaction during both waves of the pandemic than those without children (Table A 10).

While some workers can continue their jobs during a pandemic almost as usual, some need to work harder (health care, logistics), and others less. If crises force employers to reduce their labor input substantially, the German government financially supports a reduction of hours across the firm to prevent layoffs (*Kurzarbeit*, or short-time work). According to official statistics (Bundesagentur für Arbeit 2021), the number of short-time workers increased from 440,000 in February 2020 to 2,834,000 in March 2020. It peaked in April 2020 at almost 6 million short-time workers (about 18 % of all employees who are subject to social insurance contributions). After the pandemic broke out (late March/early April 2020), we implemented an item in the questionnaire on whether people were currently subject to Germany's short-time work scheme. Hence, at the start of the first lockdown, we can only distinguish between people who reported being short-time workers within the following 31 days and those who did not. Here, short-time work already seems to add to the mental health burden of the pandemic (Table A 4). For all the later months (later referred to as '$t > 0$'), it is possible to use a variable identifying current short-time workers.[7] Our analyses reveal negative interaction effects of short-time work at the time of the second month into the first lockdown ($t = 1$) on life satisfaction (Table A 6) and job satisfaction (Table A 9) as well as, again, on mental health (i.e., a positive interaction effect in the depression score). While *Kurzarbeit* prevents severe income losses, it might be perceived as an early sign of increased job insecurity, which generally translates into declines in mental health and life satisfaction (Luechinger et al., 2010; Reichert & Tauchmann, 2017). As in other contexts (Chadi & Hetschko, 2021), however, working fewer hours benefits leisure satisfaction (Table A 10).

Next, we examine the well-being impact of the pandemic dependent on workers' health. A natural guess would be to expect people who are at a high risk of severe illness from Covid-19 to suffer in particular from the pandemic. But, at first glance, their life satisfaction and mental health does not seem to differ from other workers during the first wave of the pandemic. If anything, during the second wave, their life satisfaction deviates positively from those who are not part of the risk group. The same would be true

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[6] Restlessness is also the only outcome where education seems to play a role. While workers with a tertiary degree report less of an increase of feeling restless than other groups during the first wave, they report a comparatively strong increase during the second wave (Table A 15).

[7] However, the number of observations of short-time workers in our sample at the start of the second wave of the pandemic is too low to facilitate meaningful analyses.

for the first wave if we distinguished in addition between the first fifteen days and the second fifteen days of $t = 0$, the first lockdown month. During the second fifteen days, the risk group reports higher life satisfaction than the non-risk group. Furthermore, the risk group reports a significantly less negative impact of the second wave on their mental health. Their job satisfaction also responds more positively to the second wave of the pandemic than that of workers who are not at risk of severe Covid-19. One possible explanation is that workers with underlying health conditions may generally benefit from lock-down measures concerning working life, such as social distancing, face coverings and working from home.

To identify workers with high mental health risks, we calculate the average depression score for each worker over the year 2019. An 'elevated depression score' is defined as ≥ 17 (sum across 15 items, the maximum score is 45), which is in line with the proposed cut-off for the scale (Hautzinger et al. 2012). Approximately 18 % of our sample have an elevated depression score. The negative mental health impact of both waves of the pandemic is concentrated on those workers who did not report a relatively high depression score prior to the pandemic (Table A 4) but this difference is only weakly statistically significant.

6. Concluding remarks

Our study on the effects of the Covid-19 pandemic on worker well-being has produced a number of new insights. Firstly, based on a causal identification strategy, we are able to show that the pandemic has a negative impact on workers' mental health. In addition, negative effects are documented in other measures of well-being, namely life satisfaction and momentary happiness. In terms of effect sizes, the impact of Covid-19 on well-being is small (subjective well-being) or, at best, moderate (mental health). In interpreting the results we should keep in mind that our sample consists of workers who had to register as jobseekers in the previous three years and might have experienced a negative labour market shock prior to the pandemic. Furthermore, our results refer to a highly industrialized country that generously supported many groups suffering financially from the pandemic induced restrictions.

Secondly, a common feature of all the analyzed subjective indicators of quality of life is adaptation in the sense that the negative effects are mostly observed when infection rates are high and restrictions have been imposed. Once infection rates start to fall and life returns to normal, workers' overall well-being converges to pre-pandemic levels. However, adaptation seems to be incomplete for indicators of well-being gained from certain areas of life, such as work and leisure.

Thirdly, another sign of adaptation is the preliminary finding that the second wave of the pandemic seems to have smaller well-being effects than the first wave. However, this result needs to be qualified in two ways. Due to a small sample size, our study does not cover the whole second wave of the pandemic in Germany, which lasted into the year 2021 and was immediately followed by a third wave. There was also a back and forth of loosened and tightened restrictions. This order of events could have

further implications for well-being that future studies might want to examine, ideally also based on a larger sample, as our sample size is particularly small during the second wave of the pandemic.

Additional findings also allow for deriving some preliminary implications as to why the pandemic affects well-being. The fact that indicators of affective well-being and mental health start to respond to rising infection rates before restrictions are introduced point to the role of anxiety about the future in mediating the pandemic's impact on well-being (see also Satici et al., 2020). This is corroborated by increases in restlessness and stronger negative effects in short-time workers. Although they gain leisure time and are prevented from losing much income when working fewer hours, they seem to perceive their future employment stability (and thus incomes) to be uncertain due to the economic crisis triggered by the pandemic. Apparently, the short-time work program does not provide perfect insurance. It alleviates the immediate financial loss, and for some prevents the harmful well-being effects of unemployment. In the process, workers can preserve their social status of being employed (see, e.g., Hetschko et al., 2021). Nevertheless, it does not fully buffer the individual well-being effect of the labor market shock, as the immediate well-being cost of shattered future employment and income expectations is not covered.

The fact that we do not find more subgroup differences, not even between men and women, might point to the importance of restrictions that affect everyone in well-being, such as the limitations on personal freedoms. This is in line with the results of a more specific analysis of this point based on a post-lockdown survey provided by Konrad and Simon (2021). Similarly, Serrano-Alarcón et al. (2021) find that the timing of the end of general restrictions coincides with the recovery of mental health. In the meantime, employers might want to increase psychological support for their employees, enabling them to cope with the disruption to their lives brought about by the restrictions.

A positive influence of the restriction may be seen in the absence of more pronounced well-being effects in workers who are at a high risk of severe illness from Covid-19. It seems that lockdown measures countervail potential negative effects of higher health risks. If this interpretation, though speculative, were correct, it would hint at the beneficial effects of lockdown measures to protect people with higher health risks.

Our results shed light on the high mental health cost of the pandemic and the subsequent lockdown measures. They show that the pressure on the health care system could extend to mental health, at least when the pandemic continues into the longer term. Hence, the political decision to impose a lockdown has to consider physical health benefits as well as the threats to mental health. As we observe negative effects of rising infections during the first and second wave, over a longer time span, people's well-being may be negatively affected by an ongoing uncontrolled pandemic. Lockdown measures may alleviate these effects, but at the same time yield detrimental effects in their own right. Since we observe swift adaptation, the good news is that when the pandemic is under control recovery should soon follow.

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Online Appendix

The Effects of the Covid-19 Pandemic on the Mental Health and Subjective Well-Being of Workers: An Event Study Based on High-Frequency Panel Data

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This version: 3 August 2021

Table A 1: Items of the Center for Epidemiologic Studies Depression Scale (CES-D)

The following questions will now focus on how you felt during the past week. For each of the statements on this list, please tell me the answer that best corresponds to how you felt during the past week. ***During the past week****…*

1. I was bothered by things that usually don't bother me
2. I felt that I could not shake off the blues even with help from my family or friends
3. I had trouble keeping my mind on what I was doing
4. I felt depressed
5. I felt that everything I did was an effort
6. I thought my life had been a failure
7. I felt fearful
8. My sleep was restless
9. I was happy (coded in reverse)
10. I talked less than usual
11. I felt lonely
12. I enjoyed life (coded in reverse)
13. I felt sad
14. I felt that people dislike me
15. I could not get "going"

Source: National Institute of Mental Health.

Table A 2: Outcome variables at the time of first lockdown (t = 0) and the reference level of well-being (t = -15 to t = -3)

	Mean	(SD)	1. Quartile	Median	3. Quartile	N
Depression score						
t = -15 to *t* = -3	23.25	(20.38)	7.14	17.78	33.33	7,532
t = 0	29.29	(21.45)	11.11	24.44	42.22	657
Satisfaction With Life Scale						
t = -15 to *t* = -3	62.67	(18.79)	50.00	63.33	76.67	7,569
t = 0	62.00	(19.06)	50.00	66.67	76.67	658
Momentary mood assessment: happy						
t = -15 to *t* = -3	65.21	(20.19)	50.00	66.67	79.17	5,136
t = 0	62.75	(20.98)	50.00	62.50	75.00	477
Momentary mood assessment: unhappy						
t = -15 to *t* = -3	21.22	(21.39)	0.00	16.67	35.00	5,140
t = 0	23.55	(23.24)	0.00	18.75	40.00	479
Momentary mood assessment: sleepy						
t = -15 to *t* = -3	34.26	(21.97)	16.67	33.33	50.00	5,142
t = 0	33.15	(21.62)	16.67	33.33	50.00	477
Momentary mood assessment: awake						
t = -15 to *t* = -3	65.56	(20.21)	50.00	66.67	80.00	5,142
t = 0	65.98	(20.13)	50.00	66.67	80.00	478
Momentary mood assessment: restless						
t = -15 to *t* = -3	23.56	(21.02)	4.17	20.00	37.50	5,141
t = 0	25.99	(23.05)	4.17	25.00	41.67	478
Momentary mood assessment: calm						
t = -15 to *t* = -3	67.02	(20.18)	50.00	66.67	81.25	5,142
t = 0	65.56	(21.22)	50.00	65.00	80.00	478
Satisfaction with family life						
t = -15 to *t* = -3	66.22	(23.08)	50.00	70.00	80.00	6,945
t = 0	64.19	(23.75)	50.00	70.00	80.00	661
Satisfaction with leisure						
t = -15 to *t* = -3	61.07	(22.38)	50.00	60.00	80.00	6,954
t = 0	57.64	(23.40)	40.00	60.00	80.00	660
Satisfaction with household chores						
t = -15 to *t* = -3	63.74	(20.98)	50.00	70.00	80.00	6,930
t = 0	63.79	(20.76)	50.00	70.00	80.00	659
Satisfaction with job						
t = -15 to *t* = -3	61.99	(22.53)	50.00	70.00	80.00	5,295
t = 0	62.75	(22.71)	50.00	70.00	80.00	545

Note: Table shows the means, standard deviations, quartiles and sample sizes of different outcome variables for individuals who responded to respective items for the reference level of well-being before the outbreak of the pandemic (*t* = -15 to *t* = -3) and below during the time of the first lockdown between March 13, 2020 and April 12, 2020 (*t* = 0).

Table A 3: Time intervals and corresponding time periods

Interval	Corresponding time period
t = -15	19.12.2018 – 17.01.2019
t = -14	18.01.2019 – 16.02.2019
t = -13	17.02.2019 – 18.03.2019
t = -12	19.03.2019 – 17.04.2019
t = -11	18.04.2019 – 17.05.2019
t = -10	18.05.2019 – 16.06.2019
t = -9	17.06.2019 – 16.07.2019
t = -8	17.07.2019 – 15.08.2019
t = -7	16.08.2019 – 14.09.2019
t = -6	15.09.2019 – 14.10.2019
t = -5	15.10.2019 – 13.11.2019
t = -4	14.11.2019 – 13.12.2019
t = -3	14.12.2019 – 12.01.2020
t = -2	13.01.2020 – 11.02.2020
t = -1	12.02.2020 – 12.03.2020
t = 0	13.03.2020 – 12.04.2020
t = 1	13.04.2020 – 12.05.2020
t = 2	13.05.2020 – 11.06.2020
t = 3	12.06.2020 – 11.07.2020
t = 4	12.07.2020 – 10.08.2020
t = 5	11.08.2020 – 09.09.2020
t = 6	10.09.2020 – 09.10.2020
t = 7	10.10.2020 – 08.11.2020
t = 8	09.11.2020 – 08.12.2020

Table A 4: Individual-specific fixed effects regressions, depression score

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
t = -2	2.078***	2.074***	2.076***	2.075***	2.078***	2.079***	2.071***	2.079***	2.085***
	(0.554)	(0.554)	(0.555)	(0.554)	(0.554)	(0.554)	(0.548)	(0.554)	(0.554)
t = -1	1.911***	1.903**	1.909***	1.908***	1.910***	1.491*	1.995***	1.915***	1.916***
	(0.577)	(0.577)	(0.577)	(0.577)	(0.577)	(0.618)	(0.565)	(0.576)	(0.577)
t = -1 * Covid-19 risk group						1.736			
						(1.281)			
t = 0	5.700***		5.426***	5.266***	5.981***	5.750***	6.211***	6.237***	5.672***
	(0.722)		(0.866)	(0.738)	(0.819)	(0.751)	(0.788)	(0.734)	(0.925)
t = 0 * 0-15 days since lockdown		6.476***							
		(0.922)							
t = 0 * 16-30 days since lockdown		5.034***							
		(0.862)							
t = 0 * Female			0.500						
			(1.047)						
t = 0 * Short-time work within 31 days				2.867+					
				(1.613)					
t = 0 * Children in household					-0.785				
					(1.106)				
t = 0 * Covid-19 risk group						-0.237			
						(1.355)			
t = 0 * Poor health							-0.984		
							(1.116)		
t = 0 * Elevated depression score in 2019								-2.946+	
								(1.524)	
t = 0 * University degree									0.059
									(1.059)
t = 1	3.304***	3.291***	3.301***	2.729***	3.303***	3.296***	3.657***	3.311***	3.306***
	(0.720)	(0.720)	(0.719)	(0.748)	(0.720)	(0.720)	(0.710)	(0.719)	(0.719)
t = 1 * Short-time work				3.642*					
				(1.706)					
t = 2	1.448*	1.432*	1.445*	1.433*	1.447*	1.440*	1.702*	1.454*	1.449*
	(0.682)	(0.682)	(0.682)	(0.681)	(0.682)	(0.682)	(0.660)	(0.682)	(0.682)
t = 3	1.583*	1.570*	1.581*	1.569*	1.583*	1.577*	1.756*	1.592*	1.584*
	(0.746)	(0.745)	(0.746)	(0.744)	(0.746)	(0.745)	(0.728)	(0.745)	(0.746)
t = 4	0.608	0.593	0.606	0.592	0.608	0.602	0.649	0.614	0.608
	(0.737)	(0.738)	(0.738)	(0.737)	(0.738)	(0.737)	(0.711)	(0.736)	(0.737)
t = 5	0.789	0.775	0.787	0.776	0.789	0.784	0.967	0.799	0.787
	(0.689)	(0.689)	(0.689)	(0.689)	(0.689)	(0.689)	(0.678)	(0.689)	(0.689)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
t = 6	-0.415	-0.428	-0.416	-0.427	-0.415	-0.421	-0.168	-0.406	-0.420
	(0.770)	(0.770)	(0.770)	(0.770)	(0.770)	(0.770)	(0.745)	(0.769)	(0.770)
t = 7	1.202	1.189	1.201	1.191	1.202	1.196	1.243+	1.210	1.196
	(0.765)	(0.765)	(0.765)	(0.766)	(0.765)	(0.765)	(0.748)	(0.764)	(0.765)
t = 8	3.391***	3.378***	3.060**	3.380***	3.333***	4.029***	3.718***	3.985***	2.839**
	(0.780)	(0.780)	(0.945)	(0.779)	(0.883)	(0.833)	(0.845)	(0.801)	(1.034)
t = 8 * Female			0.597						
			(1.178)						
t = 8 * Children in household					0.156				
					(1.230)				
t = 8 * Covid-19 risk group						-2.791+			
						(1.429)			
t = 8 * Poor health							-0.881		
							(1.271)		
t = 8 * Elevated depression score in 2019								-3.250+	
								(1.685)	
t = 8 * University degree									1.011
									(1.215)
Covid-19 risk group	2.434**	2.418**	2.440**	2.430**	2.440**	2.476**		2.452**	2.426**
	(0.893)	(0.892)	(0.894)	(0.889)	(0.893)	(0.909)		(0.888)	(0.893)
Children in household	1.708+	1.719+	1.713+	1.702+	1.733+	1.704+	1.725+	1.693+	1.699+
	(1.025)	(1.025)	(1.025)	(1.023)	(1.029)	(1.022)	(0.986)	(1.024)	(1.026)
Partner or married	0.135	0.129	0.128	0.134	0.136	0.129	0.148	0.076	0.132
	(1.068)	(1.068)	(1.067)	(1.064)	(1.068)	(1.070)	(1.030)	(1.075)	(1.068)
HH income below 1,000 euro	-0.631	-0.626	-0.626	-0.653	-0.632	-0.661	-0.632	-0.603	-0.632
	(0.884)	(0.884)	(0.884)	(0.883)	(0.885)	(0.884)	(0.842)	(0.881)	(0.884)
HH income 2,000 - 3,000 euro	-0.939	-0.941	-0.936	-0.916	-0.948	-0.950	-0.953	-0.931	-0.942
	(0.598)	(0.598)	(0.599)	(0.598)	(0.598)	(0.598)	(0.580)	(0.598)	(0.598)
HH income 3,000 - 4,000 euro	-0.763	-0.762	-0.758	-0.751	-0.770	-0.759	-0.770	-0.785	-0.763
	(0.665)	(0.665)	(0.666)	(0.666)	(0.665)	(0.664)	(0.646)	(0.664)	(0.665)
HH income 4,000 - 5,000 euro	-1.140	-1.141	-1.140	-1.121	-1.152	-1.144	-1.182	-1.162	-1.154
	(0.776)	(0.776)	(0.777)	(0.776)	(0.777)	(0.775)	(0.751)	(0.775)	(0.776)
HH income >= 5,000 euro	-0.400	-0.388	-0.405	-0.383	-0.403	-0.408	-0.402	-0.422	-0.419
	(0.962)	(0.961)	(0.963)	(0.961)	(0.962)	(0.959)	(0.955)	(0.958)	(0.962)
Registered as unemployed	0.212	0.209	0.211	0.246	0.209	0.223	0.122	0.207	0.216
	(0.602)	(0.602)	(0.602)	(0.602)	(0.602)	(0.602)	(0.588)	(0.600)	(0.602)
Registered as job-seeker and in training	1.107	1.100	1.106	1.132	1.106	1.094	1.282	1.065	1.107
	(0.905)	(0.905)	(0.905)	(0.905)	(0.906)	(0.907)	(0.899)	(0.906)	(0.906)
Other	1.951+	1.950+	1.945+	1.977*	1.945+	1.998*	1.967*	1.971*	1.953+
	(1.004)	(1.004)	(1.004)	(1.003)	(1.003)	(1.003)	(0.971)	(1.001)	(1.004)
Spring	-0.273	-0.269	-0.272	-0.268	-0.272	-0.266	-0.153	-0.275	-0.269
	(0.420)	(0.420)	(0.420)	(0.420)	(0.420)	(0.420)	(0.418)	(0.420)	(0.420)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Summer	-1.151*	-1.150*	-1.152*	-1.147*	-1.151*	-1.147*	-0.775+	-1.155*	-1.146*
	(0.452)	(0.452)	(0.452)	(0.451)	(0.452)	(0.452)	(0.444)	(0.452)	(0.452)
Autumn	1.084**	1.086**	1.083**	1.086**	1.085**	1.089**	1.214**	1.081**	1.096**
	(0.406)	(0.406)	(0.406)	(0.406)	(0.406)	(0.405)	(0.402)	(0.407)	(0.407)
Month of survey participation <=3	0.294	0.295	0.291	0.297	0.293	0.297	0.191	0.291	0.296
	(0.514)	(0.514)	(0.514)	(0.514)	(0.514)	(0.514)	(0.499)	(0.514)	(0.514)
Month of survey participation <=12	-0.175	-0.192	-0.177	-0.193	-0.176	-0.183	-0.133	-0.163	-0.176
	(0.471)	(0.470)	(0.471)	(0.470)	(0.471)	(0.470)	(0.459)	(0.470)	(0.471)
University degree	-4.341	-4.367	-4.324	-4.365	-4.329	-4.359	-4.903+	-4.308	-4.347
	(2.802)	(2.797)	(2.805)	(2.787)	(2.801)	(2.793)	(2.568)	(2.792)	(2.805)
Occupational degree	-0.396	-0.394	-0.373	-0.415	-0.384	-0.427	-1.048	-0.422	-0.359
	(2.213)	(2.209)	(2.211)	(2.209)	(2.213)	(2.209)	(2.050)	(2.200)	(2.219)
Poor health							7.029***		
							(0.481)		
Constant	25.219***	25.247***	25.204***	25.239***	25.203***	25.242***	23.628***	25.257***	25.211***
	(2.520)	(2.516)	(2.521)	(2.514)	(2.519)	(2.515)	(2.341)	(2.514)	(2.524)
R2 within	0.021	0.022	0.022	0.022	0.022	0.022	0.054	0.022	0.022
R2 between	0.030	0.030	0.030	0.030	0.030	0.030	0.239	0.023	0.030
R2 overall	0.028	0.028	0.028	0.028	0.028	0.028	0.160	0.023	0.028
Mean	24.437	24.437	24.437	24.437	24.437	24.437	24.437	24.437	24.437
Number of observations	14,164	14,164	14,164	14,164	14,164	14,164	14,164	14,164	14,164
Number of individuals	730	730	730	730	730	730	730	730	730

Note: Standard errors in parentheses, clustered at individual level. All regressions include individual-specific fixed effects. +, *, ** and *** denote 10 %, 5 % , 1 % and 0.1 % significance level. *t* = x represents 30-day intervals since lockdown (with reference date March 13, 2020). Reference category *t* = -15 till *t* = -3, monthly household income between 1,000 and 2,000 euro, employed or self-employed, winter, no occupational degree, good health. Only persons who have at least one observation before and after the lockdown are included.

Table A 5: Individual-specific fixed effects regressions, individual items of depression score

	Item 1	Item 2	Item 3	Item 4	Item 5	Item 6	Item 7	Item 8	Item 9	Item 10	Item 11	Item 12	Item 13	Item 14	Item 15
t = -2	0.091**	0.059+	0.096**	0.054+	0.093**	0.027	0.066*	0.080*	0.021	0.026	0.056*	0.125***	0.045	0.046+	0.038
	(0.031)	(0.031)	(0.030)	(0.029)	(0.030)	(0.023)	(0.027)	(0.032)	(0.030)	(0.029)	(0.026)	(0.032)	(0.029)	(0.024)	(0.028)
t = -1	0.082**	0.084**	0.098**	0.071*	0.013	0.048*	0.065*	0.022	0.038	0.064*	0.049+	0.099**	0.053+	0.040+	0.006
	(0.031)	(0.032)	(0.030)	(0.031)	(0.031)	(0.024)	(0.026)	(0.031)	(0.030)	(0.031)	(0.029)	(0.034)	(0.030)	(0.023)	(0.030)
t = 0	0.480***	0.145***	0.110**	0.139***	-0.008	0.071**	0.358***	0.020	0.190***	0.281***	0.155***	0.303***	0.198***	-0.027	0.116**
	(0.040)	(0.035)	(0.036)	(0.037)	(0.039)	(0.027)	(0.036)	(0.036)	(0.036)	(0.038)	(0.035)	(0.039)	(0.035)	(0.027)	(0.035)
t = 1	0.257***	0.095**	0.104**	0.091*	-0.088*	0.053+	0.181***	0.017	0.073*	0.158***	0.133***	0.182***	0.127***	-0.014	0.087*
	(0.038)	(0.036)	(0.035)	(0.037)	(0.037)	(0.027)	(0.033)	(0.036)	(0.035)	(0.038)	(0.033)	(0.040)	(0.035)	(0.028)	(0.036)
t = 2	0.119**	0.071+	0.033	0.029	-0.040	0.052+	0.088**	0.016	0.040	0.061+	0.044	0.086*	0.027	-0.018	0.039
	(0.037)	(0.037)	(0.034)	(0.035)	(0.036)	(0.028)	(0.031)	(0.038)	(0.034)	(0.035)	(0.031)	(0.039)	(0.035)	(0.028)	(0.034)
t = 3	0.089*	0.078*	0.071*	0.025	-0.080*	0.047+	0.075*	0.006	0.023	0.076*	0.029	0.126**	0.067+	0.008	0.052
	(0.040)	(0.036)	(0.034)	(0.038)	(0.038)	(0.028)	(0.033)	(0.039)	(0.036)	(0.036)	(0.034)	(0.040)	(0.036)	(0.028)	(0.034)
t = 4	0.039	0.032	0.029	0.008	-0.110**	0.050+	0.068*	0.014	-0.011	0.008	0.037	0.046	0.029	0.014	0.046
	(0.038)	(0.036)	(0.035)	(0.039)	(0.039)	(0.027)	(0.032)	(0.040)	(0.038)	(0.038)	(0.034)	(0.041)	(0.035)	(0.029)	(0.037)
t = 5	0.059	0.034	0.014	0.019	-0.102**	0.072*	0.071*	0.003	-0.000	0.006	0.037	0.072+	0.032	0.008	0.008
	(0.037)	(0.034)	(0.033)	(0.036)	(0.036)	(0.030)	(0.032)	(0.037)	(0.035)	(0.033)	(0.031)	(0.040)	(0.034)	(0.028)	(0.033)
t = 6	0.007	-0.028	-0.005	-0.039	-0.045	0.021	-0.041	0.020	0.009	-0.003	-0.049	0.009	-0.032	0.008	-0.005
	(0.036)	(0.039)	(0.037)	(0.039)	(0.041)	(0.030)	(0.032)	(0.037)	(0.037)	(0.036)	(0.033)	(0.041)	(0.036)	(0.030)	(0.035)
t = 7	0.146***	0.025	0.054	0.020	-0.048	0.046	0.053	0.021	0.050	0.015	-0.018	0.107**	0.043	-0.027	0.055
	(0.041)	(0.039)	(0.036)	(0.039)	(0.040)	(0.028)	(0.036)	(0.040)	(0.036)	(0.036)	(0.033)	(0.041)	(0.036)	(0.029)	(0.035)
t = 8	0.181***	0.115**	0.157***	0.124**	0.050	0.087**	0.128***	0.077+	0.121**	0.072*	0.061+	0.220***	0.075+	-0.030	0.101**
	(0.040)	(0.041)	(0.037)	(0.041)	(0.041)	(0.031)	(0.037)	(0.040)	(0.037)	(0.035)	(0.034)	(0.043)	(0.040)	(0.029)	(0.036)
Constant	0.759***	0.557***	1.123***	0.670***	0.950***	0.446***	0.533***	1.160***	1.055***	0.712***	0.566***	1.129***	0.506***	0.342**	0.816***
	(0.093)	(0.100)	(0.150)	(0.118)	(0.169)	(0.111)	(0.080)	(0.159)	(0.118)	(0.086)	(0.107)	(0.181)	(0.110)	(0.106)	(0.074)
R2 within	0.035	0.008	0.009	0.010	0.009	0.007	0.023	0.005	0.010	0.011	0.011	0.021	0.012	0.005	0.008
R2 between	0.038	0.035	0.001	0.017	0.012	0.017	0.035	0.025	0.013	0.028	0.034	0.002	0.007	0.019	0.038
R2 overall	0.037	0.020	0.001	0.014	0.010	0.014	0.030	0.016	0.011	0.020	0.023	0.008	0.009	0.012	0.023
Mean	0.749	0.582	0.887	0.713	0.887	0.324	0.499	1.125	1.045	0.622	0.532	1.291	0.644	0.366	0.671
Number of observations	14,050	13,826	14,106	14,120	14,128	14,032	14,069	14,132	14,085	13,585	14,066	14,042	14,101	13,930	14,107
Number of individuals	730	730	730	730	730	730	730	730	730	730	730	730	730	730	730

Note: Standard errors in parentheses, clustered at individual level. All regressions include individual-specific fixed effects. +, *, ** and *** denote 10 %, 5 % , 1 % and 0.1 % significance level. t = x represents 30-day intervals since lockdown (with reference date March 13, 2020). Reference category t = -15 till t = -3. Binary control variables include being part of the Covid-19 risk group, children living in the same household, having a partner or being married, income brackets, the employment states unemployed, job seeker in training, and other, the meteorological seasons, being observed within the first three months of GJSP participation, and in the first year of GJSP participation, educational attainment. Only persons who have at least one observation before and after the lockdown are included. Items are not transformed into POMP-Scores but remain in their original scale. The column number refers to the corresponding item of the depression score as listed in Table A 1.

Table A 6: Individual-specific fixed effects regressions, Satisfaction With Life Scale

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
t = -2	0.242	0.243	0.244	0.244	0.243	0.233	0.211	0.245	0.237
	(0.395)	(0.395)	(0.395)	(0.395)	(0.395)	(0.394)	(0.394)	(0.395)	(0.394)
t = -1	-0.113	-0.108	-0.112	-0.111	-0.112	-0.163	-0.189	-0.109	-0.117
	(0.391)	(0.391)	(0.391)	(0.391)	(0.391)	(0.417)	(0.385)	(0.391)	(0.391)
t = -1 * Covid-19 risk group						0.181			
						(0.851)			
t = 0	-1.382**		-1.119+	-1.312**	-1.774***	-1.572**	-1.505**	-1.014*	-1.346*
	(0.485)		(0.594)	(0.494)	(0.534)	(0.513)	(0.522)	(0.484)	(0.616)
t = 0 * 0-15 days since lockdown		-1.841**							
		(0.571)							
t = 0 * 16-30 days since lockdown		-0.554							
		(0.600)							
t = 0 * Female			-0.485						
			(0.673)						
t = 0 * Short-time work within 31 days				-0.612					
				(1.283)					
t = 0 * Children in household					1.094				
					(0.730)				
t = 0 * Covid-19 risk group						0.789			
						(0.931)			
t = 0 * Poor health							0.081		
							(0.737)		
t = 0 * Elevated depression score in 2019								-2.012+	
								(1.097)	
t = 0 * University degree									-0.073
									(0.679)
t = 1	-0.488	-0.476	-0.486	-0.159	-0.486	-0.489	-0.667	-0.480	-0.490
	(0.517)	(0.516)	(0.517)	(0.537)	(0.517)	(0.517)	(0.510)	(0.517)	(0.517)
t = 1 * Short-time work				-2.021*					
				(0.957)					
t = 2	0.212	0.229	0.214	0.219	0.213	0.211	0.084	0.223	0.210
	(0.454)	(0.453)	(0.454)	(0.454)	(0.454)	(0.454)	(0.445)	(0.454)	(0.454)
t = 3	-0.209	-0.193	-0.207	-0.201	-0.208	-0.211	-0.288	-0.199	-0.210
	(0.505)	(0.504)	(0.505)	(0.506)	(0.505)	(0.505)	(0.495)	(0.505)	(0.506)
t = 4	-0.123	-0.105	-0.121	-0.115	-0.123	-0.126	-0.173	-0.114	-0.124
	(0.519)	(0.519)	(0.519)	(0.520)	(0.519)	(0.519)	(0.509)	(0.519)	(0.519)
t = 5	-0.252	-0.235	-0.251	-0.245	-0.251	-0.254	-0.336	-0.242	-0.252
	(0.508)	(0.507)	(0.508)	(0.508)	(0.508)	(0.507)	(0.499)	(0.507)	(0.508)
t = 6	-0.567	-0.551	-0.566	-0.560	-0.567	-0.562	-0.671	-0.558	-0.564
	(0.490)	(0.489)	(0.490)	(0.490)	(0.490)	(0.489)	(0.483)	(0.489)	(0.490)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
t = 7	-0.483	-0.466	-0.482	-0.477	-0.482	-0.478	-0.503	-0.474	-0.480
	(0.493)	(0.493)	(0.493)	(0.493)	(0.493)	(0.493)	(0.485)	(0.493)	(0.493)
t = 8	0.534	0.549	0.695	0.540	0.380	-0.156	0.178	0.391	0.901
	(0.504)	(0.504)	(0.658)	(0.505)	(0.591)	(0.532)	(0.538)	(0.500)	(0.728)
t = 8 * Female			-0.290						
			(0.799)						
t = 8 * Children in household					0.415				
					(0.789)				
t = 8 * Covid-19 risk group						3.118**			
						(1.018)			
t = 8 * Poor health							0.965		
							(0.862)		
t = 8 * Elevated depression score in 2019								0.832	
								(1.358)	
t = 8 * University degree									-0.675
									(0.811)
Covid-19 risk group	-1.611*	-1.603*	-1.616*	-1.609*	-1.619*	-1.768**		-1.607*	-1.607*
	(0.636)	(0.636)	(0.637)	(0.636)	(0.635)	(0.644)		(0.636)	(0.636)
Children in household	-0.937	-0.942	-0.940	-0.935	-1.008	-0.925	-0.963	-0.936	-0.930
	(0.893)	(0.894)	(0.893)	(0.893)	(0.892)	(0.891)	(0.886)	(0.893)	(0.894)
Partner or married	0.787	0.781	0.790	0.790	0.782	0.797	0.775	0.776	0.788
	(0.919)	(0.919)	(0.921)	(0.919)	(0.919)	(0.919)	(0.902)	(0.919)	(0.919)
HH income below 1,000 euro	-3.820***	-3.821***	-3.824***	-3.808***	-3.819***	-3.804***	-3.823***	-3.803***	-3.822***
	(0.921)	(0.920)	(0.921)	(0.919)	(0.922)	(0.921)	(0.913)	(0.922)	(0.921)
HH income 2,000 - 3,000 euro	1.247**	1.250**	1.243**	1.239**	1.256**	1.256**	1.262**	1.252**	1.249**
	(0.475)	(0.476)	(0.475)	(0.476)	(0.476)	(0.476)	(0.469)	(0.476)	(0.475)
HH income 3,000 - 4,000 euro	1.387*	1.385*	1.383*	1.382*	1.396*	1.385*	1.402*	1.388*	1.388*
	(0.576)	(0.575)	(0.576)	(0.576)	(0.576)	(0.576)	(0.571)	(0.576)	(0.576)
HH income 4,000 - 5,000 euro	1.934**	1.931**	1.933**	1.929**	1.952**	1.938**	1.953**	1.933**	1.943**
	(0.680)	(0.679)	(0.680)	(0.680)	(0.680)	(0.679)	(0.674)	(0.680)	(0.681)
HH income >= 5,000 euro	1.793*	1.780*	1.795*	1.788*	1.800*	1.813*	1.791*	1.791*	1.808*
	(0.867)	(0.866)	(0.867)	(0.866)	(0.867)	(0.865)	(0.869)	(0.868)	(0.868)
Registered as unemployed	-2.476***	-2.475***	-2.474***	-2.490***	-2.474***	-2.487***	-2.434***	-2.476***	-2.477***
	(0.511)	(0.511)	(0.511)	(0.512)	(0.511)	(0.512)	(0.504)	(0.511)	(0.512)
Registered as job-seeker and in training	-0.718	-0.719	-0.717	-0.724	-0.718	-0.704	-0.810	-0.730	-0.718
	(0.860)	(0.860)	(0.861)	(0.860)	(0.861)	(0.860)	(0.842)	(0.860)	(0.860)
Other	-1.347+	-1.353+	-1.343+	-1.359+	-1.342+	-1.378+	-1.360+	-1.333+	-1.348+
	(0.756)	(0.756)	(0.756)	(0.756)	(0.757)	(0.751)	(0.741)	(0.755)	(0.756)
Spring	0.034	0.029	0.034	0.032	0.033	0.026	-0.028	0.031	0.031
	(0.290)	(0.289)	(0.290)	(0.290)	(0.289)	(0.289)	(0.287)	(0.289)	(0.289)
Summer	0.507+	0.501+	0.507+	0.506+	0.507+	0.501+	0.331	0.505+	0.503+
	(0.303)	(0.302)	(0.303)	(0.303)	(0.302)	(0.303)	(0.299)	(0.302)	(0.303)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Autumn	0.063	0.058	0.064	0.062	0.064	0.048	0.000	0.061	0.055
	(0.276)	(0.276)	(0.276)	(0.276)	(0.276)	(0.277)	(0.274)	(0.276)	(0.277)
Month of survey participation <=3	-2.084***	-2.092***	-2.083***	-2.086***	-2.083***	-2.087***	-2.060***	-2.086***	-2.086***
	(0.394)	(0.394)	(0.394)	(0.394)	(0.394)	(0.394)	(0.389)	(0.394)	(0.394)
Month of survey participation <=12	-0.488	-0.466	-0.486	-0.480	-0.487	-0.490	-0.512+	-0.476	-0.488
	(0.313)	(0.312)	(0.314)	(0.313)	(0.313)	(0.313)	(0.306)	(0.313)	(0.313)
University degree	0.328	0.346	0.316	0.339	0.312	0.304	0.589	0.347	0.333
	(3.060)	(3.067)	(3.063)	(3.058)	(3.065)	(3.059)	(2.873)	(3.063)	(3.062)
Occupational degree	0.549	0.544	0.534	0.555	0.531	0.582	0.825	0.543	0.525
	(3.060)	(3.068)	(3.063)	(3.062)	(3.068)	(3.069)	(2.864)	(3.065)	(3.061)
Poor health							-3.198***		
							(0.310)		
Constant	62.594***	62.579***	62.605***	62.582***	62.632***	62.622***	63.232***	62.584***	62.599***
	(3.028)	(3.035)	(3.031)	(3.028)	(3.035)	(3.029)	(2.836)	(3.033)	(3.029)
R2 within	0.027	0.027	0.027	0.027	0.027	0.028	0.040	0.027	0.027
R2 between	0.078	0.079	0.078	0.079	0.078	0.078	0.253	0.082	0.079
R2 overall	0.060	0.060	0.060	0.060	0.060	0.060	0.165	0.062	0.060
Mean	62.798	62.798	62.798	62.798	62.798	62.798	62.798	62.798	62.798
Number of observations	14,236	14,236	14,236	14,236	14,236	14,236	14,236	14,236	14,236
Number of individuals	736	736	736	736	736	736	736	736	736

Note: Standard errors in parentheses, clustered at individual level. All regressions include individual-specific fixed effects. +, *, ** and *** denote 10 %, 5 % , 1 % and 0.1 % significance level. *t* = x represents 30-day intervals since lockdown (with reference date March 13, 2020). Reference category *t* = -15 till *t* = -3, monthly household income between 1,000 and 2,000 euro, employed or self-employed, winter, no occupational degree, good health. Only persons who have at least one observation before and after the lockdown are included.

Table A 7: Individual-specific fixed effects regressions, momentary mood assessment: happy

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
t = -2	-1.725*	-1.717*	-1.719*	-1.727*	-1.724*	-1.722*	-1.747*	-1.722*	-1.729*
	(0.814)	(0.814)	(0.815)	(0.814)	(0.814)	(0.814)	(0.808)	(0.814)	(0.815)
t = -1	-2.208**	-2.197**	-2.202**	-2.209**	-2.207**	-1.761*	-2.275**	-2.205**	-2.210**
	(0.794)	(0.794)	(0.794)	(0.794)	(0.794)	(0.887)	(0.791)	(0.794)	(0.795)
t = -1 * Covid-19 risk group						-1.905			
						(1.466)			
t = 0	-1.730+		-1.426	-1.361	-1.739+	-1.395	-1.373	-1.625+	-2.281+
	(0.899)		(1.136)	(0.936)	(1.011)	(0.951)	(0.972)	(0.943)	(1.189)
t = 0 * 0-15 days since lockdown		-3.436**							
		(1.182)							
t = 0 * 16-30 days since lockdown		-0.682							
		(1.067)							
t = 0 * Female			-0.565						
			(1.332)						
t = 0 * Short-time work within 31 days				-2.505					
				(1.809)					
t = 0 * Children in household					0.030				
					(1.403)				
t = 0 * Covid-19 risk group						-1.415			
						(1.810)			
t = 0 * Poor health							-1.598		
							(1.501)		
t = 0 * Elevated depression score in 2019								-0.587	
								(1.868)	
t = 0 * University degree									1.012
									(1.351)
t = 1	-1.260	-1.255	-1.256	-1.624+	-1.258	-1.259	-1.563+	-1.256	-1.257
	(0.893)	(0.893)	(0.893)	(0.931)	(0.893)	(0.892)	(0.884)	(0.893)	(0.894)
t = 1 * Short-time work				2.630					
				(1.858)					
t = 2	-0.448	-0.442	-0.443	-0.450	-0.445	-0.446	-0.683	-0.444	-0.443
	(0.933)	(0.934)	(0.934)	(0.933)	(0.933)	(0.933)	(0.920)	(0.934)	(0.934)
t = 3	-0.697	-0.700	-0.693	-0.700	-0.697	-0.699	-0.870	-0.693	-0.694
	(0.963)	(0.964)	(0.964)	(0.963)	(0.963)	(0.964)	(0.954)	(0.964)	(0.964)
t = 4	-0.732	-0.736	-0.726	-0.735	-0.730	-0.734	-0.850	-0.728	-0.729
	(1.043)	(1.044)	(1.044)	(1.044)	(1.044)	(1.044)	(1.035)	(1.044)	(1.044)
t = 5	-1.622	-1.625	-1.619	-1.623	-1.620	-1.622	-1.786+	-1.618	-1.617
	(0.994)	(0.995)	(0.994)	(0.995)	(0.995)	(0.995)	(0.986)	(0.994)	(0.994)
t = 6	-1.181	-1.183	-1.181	-1.182	-1.180	-1.186	-1.320	-1.179	-1.174
	(0.961)	(0.961)	(0.961)	(0.961)	(0.961)	(0.962)	(0.945)	(0.961)	(0.961)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
t = 7	-1.606+	-1.609+	-1.606+	-1.609+	-1.606+	-1.611+	-1.768+	-1.605+	-1.597+
	(0.952)	(0.952)	(0.952)	(0.952)	(0.952)	(0.952)	(0.931)	(0.951)	(0.952)
t = 8	-3.045**	-3.047**	-2.448+	-3.046**	-3.436**	-3.673***	-3.969***	-3.129**	-1.756
	(1.008)	(1.008)	(1.342)	(1.008)	(1.184)	(1.091)	(1.133)	(1.060)	(1.509)
t = 8 * Female			-1.087						
			(1.728)						
t = 8 * Children in household					1.079				
					(1.816)				
t = 8 * Covid-19 risk group						2.690			
						(2.116)			
t = 8 * Poor health							2.296		
							(1.887)		
t = 8 * Elevated depression score in 2019								0.474	
								(2.477)	
t = 8 * University degree									-2.261
									(1.785)
Covid-19 risk group	-1.034	-1.011	-1.046	-1.055	-1.027	-0.991		-1.036	-1.033
	(1.051)	(1.046)	(1.052)	(1.051)	(1.052)	(1.047)		(1.052)	(1.050)
Children in household	-0.692	-0.701	-0.695	-0.696	-0.743	-0.695	-0.850	-0.688	-0.652
	(1.250)	(1.252)	(1.247)	(1.249)	(1.257)	(1.248)	(1.220)	(1.250)	(1.254)
Partner or married	-0.363	-0.354	-0.351	-0.367	-0.362	-0.358	-0.304	-0.365	-0.351
	(1.388)	(1.388)	(1.390)	(1.385)	(1.389)	(1.389)	(1.358)	(1.389)	(1.385)
HH income below 1,000 euro	0.432	0.410	0.424	0.427	0.435	0.466	0.463	0.441	0.441
	(1.128)	(1.129)	(1.128)	(1.128)	(1.128)	(1.131)	(1.117)	(1.131)	(1.129)
HH income 2,000 - 3,000 euro	0.590	0.597	0.585	0.599	0.586	0.602	0.604	0.592	0.594
	(0.712)	(0.711)	(0.712)	(0.711)	(0.710)	(0.712)	(0.696)	(0.712)	(0.711)
HH income 3,000 - 4,000 euro	-0.287	-0.293	-0.296	-0.283	-0.290	-0.289	-0.270	-0.288	-0.298
	(0.882)	(0.882)	(0.882)	(0.883)	(0.882)	(0.883)	(0.866)	(0.882)	(0.881)
HH income 4,000 - 5,000 euro	-1.277	-1.261	-1.283	-1.280	-1.275	-1.276	-1.186	-1.276	-1.253
	(1.000)	(0.999)	(0.999)	(1.001)	(1.000)	(1.002)	(0.985)	(1.000)	(1.001)
HH income >= 5,000 euro	-1.072	-1.087	-1.062	-1.059	-1.074	-1.067	-1.005	-1.072	-1.029
	(1.278)	(1.279)	(1.277)	(1.279)	(1.279)	(1.278)	(1.274)	(1.278)	(1.280)
Registered as unemployed	0.841	0.847	0.847	0.853	0.835	0.816	0.890	0.840	0.835
	(0.725)	(0.725)	(0.724)	(0.726)	(0.725)	(0.724)	(0.721)	(0.725)	(0.725)
Registered as job-seeker and in training	0.895	0.881	0.897	0.888	0.888	0.899	0.857	0.887	0.898
	(1.207)	(1.209)	(1.208)	(1.208)	(1.206)	(1.207)	(1.195)	(1.206)	(1.206)
Other	0.822	0.822	0.835	0.828	0.817	0.798	0.840	0.828	0.824
	(1.140)	(1.139)	(1.139)	(1.140)	(1.139)	(1.137)	(1.125)	(1.139)	(1.141)
Spring	0.121	0.121	0.122	0.120	0.121	0.122	0.062	0.122	0.117
	(0.540)	(0.540)	(0.540)	(0.540)	(0.540)	(0.540)	(0.541)	(0.540)	(0.541)
Summer	1.013+	1.020+	1.015+	1.012+	1.014+	1.014+	0.825	1.014+	1.009+
	(0.583)	(0.584)	(0.583)	(0.583)	(0.584)	(0.583)	(0.578)	(0.583)	(0.584)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Autumn	-0.426	-0.419	-0.421	-0.428	-0.424	-0.423	-0.517	-0.424	-0.433
	(0.588)	(0.589)	(0.588)	(0.588)	(0.588)	(0.588)	(0.584)	(0.587)	(0.588)
Month of survey participation <=3	0.664	0.677	0.669	0.663	0.665	0.662	0.748	0.664	0.661
	(0.690)	(0.690)	(0.690)	(0.690)	(0.690)	(0.690)	(0.681)	(0.690)	(0.690)
Month of survey participation <=12	1.333*	1.332*	1.335*	1.331*	1.334*	1.334*	1.224*	1.338*	1.339*
	(0.560)	(0.561)	(0.560)	(0.560)	(0.560)	(0.561)	(0.550)	(0.560)	(0.561)
University degree	6.619+	6.674+	6.580+	6.623+	6.637+	6.661+	6.822+	6.636+	6.577+
	(3.684)	(3.700)	(3.676)	(3.682)	(3.691)	(3.698)	(3.506)	(3.686)	(3.703)
Occupational degree	3.912	3.952	3.891	3.923	3.910	3.940	4.056	3.919	3.845
	(2.970)	(3.001)	(2.961)	(2.967)	(2.976)	(2.978)	(2.660)	(2.972)	(2.985)
Poor health							-3.649***		
							(0.595)		
Constant	59.213***	59.151***	59.234***	59.213***	59.220***	59.164***	60.271***	59.196***	59.235***
	(3.407)	(3.429)	(3.401)	(3.406)	(3.414)	(3.418)	(3.205)	(3.408)	(3.423)
R2 within	0.014	0.015	0.014	0.015	0.014	0.015	0.022	0.014	0.015
R2 between	0.000	0.000	0.000	0.000	0.000	0.000	0.073	0.000	0.000
R2 overall	0.002	0.003	0.003	0.003	0.002	0.003	0.048	0.003	0.003
Mean	64.004	64.004	64.004	64.004	64.004	64.004	64.004	64.004	64.004
Number of observations	9,888	9,888	9,888	9,888	9,888	9,888	9,888	9,888	9,888
Number of individuals	629	629	629	629	629	629	629	629	629

Note: Standard errors in parentheses, clustered at individual level. All regressions include individual-specific fixed effects. +, *, ** and *** denote 10 %, 5 % , 1 % and 0.1 % significance level. *t* = x represents 30-day intervals since lockdown (with reference date March 13, 2020). Reference category *t* = -15 till *t* = -3, monthly household income between 1,000 and 2,000 euro, employed or self-employed, winter, no occupational degree, good health. Only persons who have at least one observation before and after the lockdown are included.

Table A 8: Individual-specific fixed effects regressions, momentary mood assessment: unhappy

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
t = -2	1.275	1.270	1.276	1.276	1.272	1.274	1.296	1.270	1.285
	(0.848)	(0.849)	(0.849)	(0.848)	(0.849)	(0.848)	(0.842)	(0.849)	(0.848)
t = -1	1.146	1.138	1.148	1.147	1.144	0.984	1.212	1.144	1.152
	(0.855)	(0.856)	(0.856)	(0.855)	(0.856)	(0.930)	(0.851)	(0.855)	(0.856)
t = -1 * Covid-19 risk group						0.712			
						(1.759)			
t = 0	2.053*		1.570	1.656+	2.219*	1.469	1.311	2.131*	2.347+
	(0.948)		(1.184)	(0.995)	(1.090)	(1.002)	(0.975)	(0.980)	(1.287)
t = 0 * 0-15 days since lockdown		3.257*							
		(1.331)							
t = 0 * 16-30 days since lockdown		1.312							
		(1.086)							
t = 0 * Female			0.912						
			(1.408)						
t = 0 * Short-time work within 31 days				2.702					
				(1.979)					
t = 0 * Children in household					-0.486				
					(1.519)				
t = 0 * Covid-19 risk group						2.475			
						(1.908)			
t = 0 * Poor health							2.752+		
							(1.664)		
t = 0 * Elevated depression score in 2019								-0.455	
								(2.203)	
t = 0 * University degree									-0.536
									(1.433)
t = 1	0.653	0.650	0.654	0.844	0.651	0.655	0.941	0.651	0.654
	(0.977)	(0.978)	(0.977)	(1.010)	(0.978)	(0.976)	(0.972)	(0.977)	(0.978)
t = 1 * Short-time work				-1.389					
				(2.191)					
t = 2	-1.461	-1.464	-1.458	-1.462	-1.464	-1.460	-1.249	-1.463	-1.461
	(0.977)	(0.977)	(0.977)	(0.977)	(0.977)	(0.977)	(0.968)	(0.978)	(0.977)
t = 3	0.339	0.341	0.342	0.338	0.339	0.342	0.489	0.339	0.340
	(0.969)	(0.970)	(0.970)	(0.969)	(0.970)	(0.970)	(0.961)	(0.970)	(0.970)
t = 4	-0.001	0.002	0.004	-0.001	-0.002	0.003	0.104	-0.003	0.001
	(1.064)	(1.064)	(1.065)	(1.064)	(1.064)	(1.064)	(1.056)	(1.064)	(1.064)
t = 5	-0.410	-0.408	-0.408	-0.411	-0.412	-0.408	-0.277	-0.409	-0.412
	(1.005)	(1.005)	(1.005)	(1.005)	(1.005)	(1.005)	(0.993)	(1.005)	(1.004)
t = 6	-0.378	-0.377	-0.381	-0.380	-0.380	-0.375	-0.267	-0.374	-0.386
	(0.967)	(0.967)	(0.968)	(0.967)	(0.967)	(0.967)	(0.956)	(0.967)	(0.967)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
t = 7	0.692	0.694	0.691	0.693	0.691	0.697	0.834	0.694	0.683
	(1.033)	(1.033)	(1.033)	(1.033)	(1.033)	(1.033)	(1.020)	(1.032)	(1.033)
t = 8	3.014**	3.015**	4.323**	3.014**	3.690**	3.448**	3.885**	3.287**	0.884
	(1.100)	(1.100)	(1.462)	(1.100)	(1.259)	(1.187)	(1.296)	(1.152)	(1.597)
t = 8 * Female			-2.387						
			(1.929)						
t = 8 * Children in household					-1.866				
					(2.074)				
t = 8 * Covid-19 risk group						-1.855			
						(2.386)			
t = 8 * Poor health							-2.188		
							(2.094)		
t = 8 * Elevated depression score in 2019								-1.488	
								(2.728)	
t = 8 * University degree									3.745+
									(1.970)
Covid-19 risk group	1.614	1.597	1.601	1.629	1.606	1.540		1.613	1.606
	(1.140)	(1.140)	(1.141)	(1.142)	(1.142)	(1.130)		(1.143)	(1.142)
Children in household	-0.168	-0.161	-0.193	-0.170	-0.058	-0.163	-0.010	-0.177	-0.236
	(1.189)	(1.191)	(1.187)	(1.188)	(1.196)	(1.185)	(1.168)	(1.190)	(1.192)
Partner or married	1.598	1.595	1.636	1.597	1.599	1.588	1.528	1.590	1.583
	(1.440)	(1.443)	(1.438)	(1.438)	(1.442)	(1.441)	(1.413)	(1.443)	(1.441)
HH income below 1,000 euro	0.050	0.065	0.038	0.051	0.046	0.026	0.020	0.056	0.041
	(1.251)	(1.251)	(1.249)	(1.250)	(1.249)	(1.254)	(1.242)	(1.252)	(1.252)
HH income 2,000 - 3,000 euro	-0.700	-0.705	-0.696	-0.703	-0.697	-0.707	-0.712	-0.701	-0.711
	(0.751)	(0.751)	(0.750)	(0.751)	(0.750)	(0.751)	(0.749)	(0.751)	(0.752)
HH income 3,000 - 4,000 euro	-0.945	-0.941	-0.943	-0.948	-0.944	-0.936	-0.949	-0.955	-0.933
	(0.978)	(0.978)	(0.977)	(0.978)	(0.977)	(0.979)	(0.971)	(0.979)	(0.979)
HH income 4,000 - 5,000 euro	-0.510	-0.521	-0.508	-0.505	-0.518	-0.501	-0.584	-0.521	-0.554
	(1.142)	(1.142)	(1.142)	(1.143)	(1.144)	(1.142)	(1.136)	(1.143)	(1.145)
HH income >= 5,000 euro	-1.072	-1.062	-1.053	-1.083	-1.071	-1.077	-1.135	-1.081	-1.147
	(1.489)	(1.490)	(1.489)	(1.488)	(1.492)	(1.487)	(1.495)	(1.488)	(1.492)
Registered as unemployed	0.498	0.494	0.508	0.496	0.508	0.518	0.456	0.498	0.506
	(0.817)	(0.817)	(0.817)	(0.817)	(0.817)	(0.818)	(0.818)	(0.818)	(0.818)
Registered as job-seeker and in training	-0.561	-0.551	-0.554	-0.548	-0.550	-0.555	-0.515	-0.573	-0.559
	(1.290)	(1.293)	(1.290)	(1.288)	(1.287)	(1.289)	(1.277)	(1.291)	(1.288)
Other	-1.156	-1.156	-1.140	-1.151	-1.153	-1.153	-1.173	-1.156	-1.162
	(1.325)	(1.325)	(1.324)	(1.327)	(1.323)	(1.323)	(1.303)	(1.325)	(1.331)
Spring	-0.072	-0.071	-0.072	-0.069	-0.072	-0.073	-0.015	-0.074	-0.067
	(0.578)	(0.578)	(0.578)	(0.578)	(0.577)	(0.578)	(0.576)	(0.578)	(0.578)
Summer	-0.779	-0.784	-0.781	-0.777	-0.781	-0.779	-0.592	-0.782	-0.774
	(0.634)	(0.634)	(0.634)	(0.634)	(0.634)	(0.634)	(0.629)	(0.634)	(0.634)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Autumn	0.261	0.256	0.265	0.263	0.256	0.260	0.355	0.255	0.272
	(0.651)	(0.651)	(0.652)	(0.651)	(0.651)	(0.650)	(0.649)	(0.650)	(0.650)
Month of survey participation <=3	1.281+	1.272+	1.283+	1.283+	1.278+	1.287+	1.213+	1.278+	1.283+
	(0.734)	(0.734)	(0.734)	(0.734)	(0.734)	(0.734)	(0.727)	(0.734)	(0.734)
Month of survey participation <=12	-1.005+	-1.004+	-1.004+	-1.007+	-1.005+	-1.002+	-0.909	-1.006+	-1.009+
	(0.602)	(0.602)	(0.602)	(0.601)	(0.602)	(0.602)	(0.593)	(0.602)	(0.602)
University degree	-9.059**	-9.097**	-9.142**	-9.055**	-9.083**	-9.090**	-9.282**	-9.048**	-9.021**
	(2.970)	(2.971)	(2.961)	(2.965)	(2.956)	(2.956)	(2.893)	(2.963)	(2.942)
Occupational degree	-7.032**	-7.061**	-7.068**	-7.035**	-7.021**	-7.053**	-7.179***	-7.045**	-6.902**
	(2.180)	(2.188)	(2.184)	(2.175)	(2.160)	(2.167)	(2.116)	(2.175)	(2.168)
Poor health							3.481***		
							(0.670)		
Constant	28.797***	28.838***	28.834***	28.795***	28.771***	28.841***	27.962***	28.814***	28.767***
	(2.726)	(2.729)	(2.721)	(2.722)	(2.714)	(2.717)	(2.662)	(2.720)	(2.710)
R2 within	0.008	0.008	0.008	0.008	0.008	0.008	0.014	0.008	0.008
R2 between	0.005	0.005	0.005	0.005	0.005	0.005	0.085	0.004	0.006
R2 overall	0.007	0.007	0.007	0.007	0.007	0.007	0.056	0.006	0.007
Mean	21.648	21.648	21.648	21.648	21.648	21.648	21.648	21.648	21.648
Number of observations	9,898	9,898	9,898	9,898	9,898	9,898	9,898	9,898	9,898
Number of individuals	629	629	629	629	629	629	629	629	629

Note: Standard errors in parentheses, clustered at individual level. All regressions include individual-specific fixed effects. +, *, ** and *** denote 10 %, 5 % , 1 % and 0.1 % significance level. *t* = x represents 30-day intervals since lockdown (with reference date March 13, 2020). Reference category *t* = -15 till *t* = -3, monthly household income between 1,000 and 2,000 euro, employed or self-employed, winter, no occupational degree, good health. Only persons who have at least one observation before and after the lockdown are included.

Table A 9: Individual-specific fixed effects regressions, satisfaction with job

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
t = -2	0.247	0.246	0.248	0.250	0.246	0.231	0.213	0.252	0.248
	(0.649)	(0.649)	(0.649)	(0.649)	(0.649)	(0.648)	(0.652)	(0.649)	(0.650)
t = -1	0.471	0.472	0.471	0.476	0.469	-0.033	0.367	0.474	0.473
	(0.736)	(0.736)	(0.736)	(0.736)	(0.736)	(0.810)	(0.731)	(0.736)	(0.738)
t = -1 * Covid-19 risk group						2.070			
						(1.421)			
t = 0	-2.025+		-2.010	-2.053*	-1.608	-1.757	-2.248*	-2.309*	-2.490+
	(1.042)		(1.255)	(1.021)	(1.133)	(1.073)	(1.114)	(1.057)	(1.282)
t = 0 * 0-15 days since lockdown		-2.229+							
		(1.236)							
t = 0 * 16-30 days since lockdown		-1.675							
		(1.174)							
t = 0 * Female			-0.029						
			(1.310)						
t = 0 * Short-time work within 31 days				0.263					
				(2.438)					
t = 0 * Children in household					-1.170				
					(1.415)				
t = 0 * Covid-19 risk group						-1.197			
						(1.779)			
t = 0 * Poor health							0.359		
							(1.447)		
t = 0 * Elevated depression score in 2019								1.847	
								(1.995)	
t = 0 * University degree									0.918
									(1.310)
t = 1	-1.822+	-1.817+	-1.823+	-0.970	-1.825+	-1.840+	-2.079+	-1.818+	-1.816+
	(1.094)	(1.092)	(1.094)	(1.110)	(1.094)	(1.094)	(1.086)	(1.093)	(1.094)
t = 1 * Short-time work				-4.598*					
				(1.975)					
t = 2	-2.048+	-2.040+	-2.049+	-2.022+	-2.049+	-2.069+	-2.203*	-2.048+	-2.039+
	(1.124)	(1.121)	(1.123)	(1.123)	(1.124)	(1.123)	(1.111)	(1.123)	(1.124)
t = 3	-2.566*	-2.558*	-2.567*	-2.541*	-2.567*	-2.583*	-2.633*	-2.566*	-2.556*
	(1.065)	(1.063)	(1.065)	(1.064)	(1.065)	(1.066)	(1.051)	(1.065)	(1.065)
t = 4	-2.870*	-2.861*	-2.870*	-2.842*	-2.871*	-2.890*	-2.880**	-2.871*	-2.860*
	(1.119)	(1.116)	(1.118)	(1.118)	(1.118)	(1.119)	(1.107)	(1.119)	(1.119)
t = 5	-2.565*	-2.557*	-2.565*	-2.539*	-2.567*	-2.582*	-2.621*	-2.564*	-2.556*
	(1.094)	(1.092)	(1.094)	(1.094)	(1.094)	(1.094)	(1.076)	(1.095)	(1.094)
t = 6	-2.287*	-2.279*	-2.288*	-2.264*	-2.287*	-2.294*	-2.427*	-2.284*	-2.278*
	(1.029)	(1.029)	(1.029)	(1.030)	(1.028)	(1.029)	(1.014)	(1.031)	(1.029)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
t = 7	-1.992+	-1.984+	-1.993+	-1.971+	-1.993+	-2.003+	-1.987+	-1.989+	-1.984+
	(1.046)	(1.045)	(1.046)	(1.046)	(1.045)	(1.045)	(1.025)	(1.047)	(1.046)
t = 8	-2.084+	-2.077+	-2.630+	-2.065+	-1.905	-3.221**	-1.982+	-2.731*	-2.091
	(1.069)	(1.069)	(1.376)	(1.069)	(1.170)	(1.123)	(1.156)	(1.071)	(1.408)
t = 8 * Female			0.976						
			(1.546)						
t = 8 * Children in household					-0.499				
					(1.621)				
t = 8 * Covid-19 risk group						5.512**			
						(1.968)			
t = 8 * Poor health							-0.056		
							(1.649)		
t = 8 * Elevated depression score in 2019								4.047+	
								(2.369)	
t = 8 * University degree									0.028
									(1.565)
Constant	60.627***	60.620***	60.606***	60.568***	60.600***	60.740***	62.008***	60.611***	60.616***
	(4.596)	(4.599)	(4.592)	(4.590)	(4.595)	(4.591)	(4.270)	(4.554)	(4.597)
R2 within	0.017	0.017	0.017	0.018	0.017	0.018	0.026	0.018	0.017
R2 between	0.000	0.000	0.000	0.000	0.000	0.000	0.035	0.000	0.000
R2 overall	0.002	0.002	0.002	0.003	0.002	0.002	0.028	0.002	0.002
Mean	62.672	62.672	62.672	62.672	62.672	62.672	62.672	62.672	62.672
Number of observations	10,784	10,784	10,784	10,784	10,784	10,784	10,784	10,784	10,784
Number of individuals	662	662	662	662	662	662	662	662	662

Note: Standard errors in parentheses, clustered at individual level. All regressions include individual-specific fixed effects. +, *, ** and *** denote 10 %, 5 % , 1 % and 0.1 % significance level. *t* = x represents 30-day intervals since lockdown (with reference date March 13, 2020). Reference category *t* = -15 till *t* = -3 Binary control variables include being part of the Covid-19 risk group, children living in the same household, having a partner or being married, income brackets, the employment states unemployed, job seeker in training, and other, the meteorological seasons, being observed within the first three months of GJSP participation, and in the first year of GJSP participation, educational attainment. Only persons who have at least one observation before and after the lockdown are included.

Table A 10: Individual-specific fixed effects regressions, satisfaction with leisure

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
t = -2	-1.076+	-1.078+	-1.080+	-1.078+	-1.071+	-1.082+	-1.077+	-1.074+	-1.065+
	(0.615)	(0.615)	(0.615)	(0.615)	(0.615)	(0.615)	(0.616)	(0.615)	(0.615)
t = -1	-0.381	-0.379	-0.386	-0.385	-0.376	-0.510	-0.471	-0.378	-0.370
	(0.646)	(0.646)	(0.646)	(0.646)	(0.646)	(0.651)	(0.634)	(0.646)	(0.646)
t = -1 * Covid-19 risk group						0.523			
						(1.447)			
t = 0	-3.910***		-4.911***	-3.829***	-4.790***	-3.930***	-4.527***	-3.681***	-4.941***
	(0.885)		(1.082)	(0.901)	(0.996)	(0.941)	(1.005)	(0.925)	(1.185)
t = 0 * 0-15 days since lockdown		-4.403***							
		(1.021)							
t = 0 * 16-30 days since lockdown		-3.091**							
		(1.144)							
t = 0 * Female			1.837						
			(1.234)						
t = 0 * Short-time work within 31 days				-0.645					
				(2.048)					
t = 0 * Children in household					2.455+				
					(1.298)				
t = 0 * Covid-19 risk group						0.078			
						(1.542)			
t = 0 * Poor health							1.546		
							(1.292)		
t = 0 * Elevated depression score in 2019								-1.253	
								(1.620)	
t = 0 * University degree									2.034
									(1.238)
t = 1	-2.084*	-2.072*	-2.093*	-2.818**	-2.080*	-2.086*	-2.305**	-2.080*	-2.071*
	(0.884)	(0.884)	(0.884)	(0.922)	(0.885)	(0.884)	(0.882)	(0.884)	(0.883)
t = 1 * Short-time work				4.511*					
				(1.827)					
t = 2	-1.268	-1.250	-1.279	-1.287	-1.265	-1.269	-1.411+	-1.263	-1.252
	(0.845)	(0.846)	(0.845)	(0.846)	(0.846)	(0.845)	(0.841)	(0.845)	(0.846)
t = 3	-0.871	-0.853	-0.881	-0.892	-0.865	-0.871	-0.960	-0.865	-0.854
	(0.842)	(0.842)	(0.842)	(0.842)	(0.842)	(0.842)	(0.833)	(0.842)	(0.842)
t = 4	-1.961*	-1.942*	-1.971*	-1.984*	-1.956*	-1.963*	-2.023*	-1.956*	-1.943*
	(0.829)	(0.829)	(0.829)	(0.829)	(0.828)	(0.829)	(0.820)	(0.828)	(0.829)
t = 5	-0.870	-0.852	-0.879	-0.890	-0.864	-0.871	-1.015	-0.865	-0.856
	(0.816)	(0.815)	(0.816)	(0.816)	(0.816)	(0.815)	(0.811)	(0.815)	(0.816)
t = 6	-1.280	-1.262	-1.286	-1.299	-1.279	-1.277	-1.427+	-1.275	-1.271
	(0.802)	(0.801)	(0.802)	(0.801)	(0.802)	(0.802)	(0.791)	(0.802)	(0.802)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
t = 7	-2.674***	-2.655***	-2.679***	-2.691***	-2.673***	-2.671***	-2.718***	-2.670***	-2.664***
	(0.796)	(0.796)	(0.796)	(0.795)	(0.796)	(0.796)	(0.790)	(0.797)	(0.797)
t = 8	-4.933***	-4.918***	-4.741***	-4.950***	-5.934***	-5.395***	-5.900***	-4.823***	-5.679***
	(0.853)	(0.853)	(1.123)	(0.852)	(1.004)	(0.932)	(0.993)	(0.896)	(1.178)
t = 8 * Female			-0.359						
			(1.392)						
t = 8 * Children in household					2.679+				
					(1.430)				
t = 8 * Covid-19 risk group						2.063			
						(1.643)			
t = 8 * Poor health							2.509+		
							(1.457)		
t = 8 * Elevated depression score in 2019								-0.576	
								(1.817)	
t = 8 * University degree									1.404
									(1.402)
Constant	56.762***	56.751***	56.727***	56.796***	56.903***	56.789***	58.148***	56.769***	56.738***
	(4.263)	(4.261)	(4.266)	(4.257)	(4.277)	(4.264)	(4.083)	(4.269)	(4.268)
R2 within	0.019	0.019	0.019	0.020	0.020	0.019	0.029	0.019	0.020
R2 between	0.000	0.000	0.000	0.000	0.000	0.000	0.094	0.000	0.000
R2 overall	0.003	0.003	0.003	0.003	0.003	0.003	0.058	0.004	0.003
Mean	60.276	60.276	60.276	60.276	60.276	60.276	60.276	60.276	60.276
Number of observations	13,639	13,639	13,639	13,639	13,639	13,639	13,639	13,639	13,639
Number of individuals	732	732	732	732	732	732	732	732	732

Note: Standard errors in parentheses, clustered at individual level. All regressions include individual-specific fixed effects. +, *, ** and *** denote 10 %, 5 % , 1 % and 0.1 % significance level. *t* = x represents 30-day intervals since lockdown (with reference date March 13, 2020). Reference category *t* = -15 till *t* = -3 Binary control variables include being part of the Covid-19 risk group, children living in the same household, having a partner or being married, income brackets, the employment states unemployed, job seeker in training, and other, the meteorological seasons, being observed within the first three months of GJSP participation, and in the first year of GJSP participation, educational attainment. Only persons who have at least one observation before and after the lockdown are included.

Table A 11: Individual-specific fixed effects regressions, satisfaction with family life

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
t = -2	-0.285	-0.286	-0.284	-0.286	-0.285	-0.285	-0.297	-0.282	-0.276
	(0.569)	(0.570)	(0.569)	(0.570)	(0.569)	(0.569)	(0.568)	(0.570)	(0.569)
t = -1	-0.373	-0.373	-0.373	-0.374	-0.373	-0.286	-0.445	-0.369	-0.365
	(0.612)	(0.613)	(0.613)	(0.613)	(0.613)	(0.618)	(0.611)	(0.613)	(0.612)
t = -1 * Covid-19 risk group						-0.365			
						(1.425)			
t = 0	-2.301**		-2.280*	-2.229**	-2.520**	-2.302**	-2.731***	-1.894*	-2.770**
	(0.745)		(0.904)	(0.772)	(0.873)	(0.781)	(0.810)	(0.752)	(0.965)
t = 0 * 0-15 days since lockdown		-2.420**							
		(0.852)							
t = 0 * 16-30 days since lockdown		-2.101*							
		(1.005)							
t = 0 * Female			-0.039						
			(1.049)						
t = 0 * Short-time work within 31 days				-0.523					
				(1.646)					
t = 0 * Children in household					0.611				
					(1.070)				
t = 0 * Covid-19 risk group						0.009			
						(1.395)			
t = 0 * Poor health							0.990		
							(1.158)		
t = 0 * Elevated depression score in 2019								-2.226	
								(1.621)	
t = 0 * University degree									0.928
									(1.062)
t = 1	-1.095	-1.092	-1.094	-1.255	-1.094	-1.093	-1.270+	-1.087	-1.088
	(0.735)	(0.735)	(0.735)	(0.781)	(0.735)	(0.735)	(0.735)	(0.735)	(0.735)
t = 1 * Short-time work				0.988					
				(1.301)					
t = 2	-0.060	-0.056	-0.060	-0.064	-0.059	-0.059	-0.163	-0.051	-0.052
	(0.778)	(0.778)	(0.778)	(0.779)	(0.778)	(0.779)	(0.774)	(0.778)	(0.779)
t = 3	0.001	0.005	0.001	-0.004	0.002	0.002	-0.055	0.011	0.008
	(0.782)	(0.781)	(0.782)	(0.783)	(0.782)	(0.783)	(0.778)	(0.782)	(0.783)
t = 4	-1.179	-1.174	-1.178	-1.183	-1.178	-1.178	-1.200	-1.169	-1.171
	(0.826)	(0.826)	(0.827)	(0.827)	(0.827)	(0.827)	(0.819)	(0.827)	(0.827)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
t = 5	0.987	0.992	0.988	0.983	0.988	0.988	0.917	0.997	0.992
	(0.746)	(0.745)	(0.746)	(0.746)	(0.746)	(0.746)	(0.739)	(0.746)	(0.746)
t = 6	-0.201	-0.197	-0.201	-0.205	-0.201	-0.201	-0.282	-0.193	-0.201
	(0.755)	(0.755)	(0.755)	(0.755)	(0.755)	(0.755)	(0.748)	(0.756)	(0.756)
t = 7	-0.688	-0.683	-0.688	-0.692	-0.687	-0.687	-0.695	-0.681	-0.687
	(0.697)	(0.696)	(0.697)	(0.697)	(0.697)	(0.697)	(0.691)	(0.697)	(0.697)
t = 8	-0.919	-0.915	-0.709	-0.923	-1.016	-0.875	-0.061	-0.672	-1.611
	(0.743)	(0.743)	(0.956)	(0.743)	(0.886)	(0.769)	(0.806)	(0.761)	(0.986)
t = 8 * Female			-0.382						
			(1.160)						
t = 8 * Children in household					0.260				
					(1.182)				
t = 8 * Covid-19 risk group						-0.195			
						(1.535)			
t = 8 * Poor health							-2.185+		
							(1.275)		
t = 8 * Elevated depression score in 2019								-1.306	
								(1.788)	
t = 8 * University degree									1.286
									(1.158)
Constant	57.244***	57.241***	57.248***	57.249***	57.267***	57.234***	57.896***	57.258***	57.229***
	(3.471)	(3.472)	(3.470)	(3.471)	(3.479)	(3.470)	(3.326)	(3.481)	(3.468)
R2 within	0.009	0.009	0.009	0.010	0.009	0.009	0.015	0.010	0.010
R2 between	0.062	0.062	0.062	0.062	0.062	0.062	0.135	0.065	0.062
R2 overall	0.050	0.049	0.049	0.050	0.049	0.049	0.099	0.052	0.049
Mean	65.653	65.653	65.653	65.653	65.653	65.653	65.653	65.653	65.653
Number of observations	13,625	13,625	13,625	13,625	13,625	13,625	13,625	13,625	13,625
Number of individuals	732	732	732	732	732	732	732	732	732

Note: Standard errors in parentheses, clustered at individual level. All regressions include individual-specific fixed effects. +, *, ** and *** denote 10 %, 5 % , 1 % and 0.1 % significance level. *t* = x represents 30-day intervals since lockdown (with reference date March 13, 2020). Reference category *t* = -15 till *t* = -3 Binary control variables include being part of the Covid-19 risk group, children living in the same household, having a partner or being married, income brackets, the employment states unemployed, job seeker in training, and other, the meteorological seasons, being observed within the first three months of GJSP participation, and in the first year of GJSP participation, educational attainment. Only persons who have at least one observation before and after the lockdown are included.

Table A 12: Individual-specific fixed effects regressions, satisfaction with household chores

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
t = -2	0.348	0.346	0.347	0.348	0.349	0.346	0.349	0.353	0.344
	(0.577)	(0.577)	(0.577)	(0.577)	(0.577)	(0.577)	(0.577)	(0.577)	(0.577)
t = -1	0.895	0.896	0.893	0.895	0.895	1.169+	0.832	0.901	0.894
	(0.600)	(0.600)	(0.600)	(0.600)	(0.601)	(0.618)	(0.595)	(0.601)	(0.601)
t = -1 * Covid-19 risk group						-1.158			
						(1.296)			
t = 0	1.033		0.687	0.793	0.898	0.752	1.497+	1.622*	0.228
	(0.747)		(0.963)	(0.776)	(0.836)	(0.778)	(0.799)	(0.778)	(0.946)
t = 0 * 0-15 days since lockdown		0.514							
		(0.874)							
t = 0 * 16-30 days since lockdown		1.893*							
		(0.914)							
t = 0 * Female			0.636						
			(1.028)						
t = 0 * Short-time work within 31 days				1.683					
				(1.575)					
t = 0 * Children in household					0.376				
					(1.100)				
t = 0 * Covid-19 risk group						1.185			
						(1.334)			
t = 0 * Poor health							-1.477		
							(1.119)		
t = 0 * Elevated depression score in 2019								-3.213*	
								(1.349)	
t = 0 * University degree									1.587
									(1.018)
t = 1	2.679***	2.692***	2.676***	2.515***	2.679***	2.684***	2.520***	2.690***	2.687***
	(0.708)	(0.707)	(0.708)	(0.732)	(0.708)	(0.708)	(0.705)	(0.708)	(0.708)
t = 1 * Short-time work				1.022					
				(1.199)					
t = 2	2.490***	2.508***	2.486***	2.486***	2.490***	2.495***	2.388**	2.503***	2.502***
	(0.750)	(0.749)	(0.750)	(0.750)	(0.750)	(0.750)	(0.750)	(0.749)	(0.749)
t = 3	1.138	1.157	1.135	1.134	1.139	1.142	1.080	1.153	1.153
	(0.764)	(0.763)	(0.764)	(0.764)	(0.763)	(0.764)	(0.759)	(0.764)	(0.763)
t = 4	0.914	0.935	0.911	0.909	0.915	0.918	0.876	0.928	0.930
	(0.752)	(0.751)	(0.752)	(0.751)	(0.751)	(0.752)	(0.746)	(0.751)	(0.751)
t = 5	0.554	0.573	0.551	0.550	0.554	0.557	0.458	0.569	0.568
	(0.722)	(0.722)	(0.723)	(0.722)	(0.722)	(0.722)	(0.718)	(0.722)	(0.722)
t = 6	-0.080	-0.061	-0.082	-0.084	-0.080	-0.076	-0.179	-0.068	-0.062
	(0.734)	(0.733)	(0.734)	(0.734)	(0.734)	(0.734)	(0.728)	(0.733)	(0.733)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
t = 7	-0.039	-0.019	-0.041	-0.041	-0.038	-0.035	-0.064	-0.028	-0.021
	(0.690)	(0.689)	(0.690)	(0.690)	(0.690)	(0.690)	(0.683)	(0.690)	(0.690)
t = 8	0.150	0.166	0.248	0.147	0.066	0.009	0.161	0.448	0.668
	(0.685)	(0.685)	(0.954)	(0.684)	(0.814)	(0.747)	(0.757)	(0.688)	(0.958)
t = 8 * Female			-0.183						
			(1.135)						
t = 8 * Children in household					0.224				
					(1.148)				
t = 8 * Covid-19 risk group						0.636			
						(1.360)			
t = 8 * Poor health							-0.020		
							(1.210)		
t = 8 * Elevated depression score in 2019								-1.564	
								(1.816)	
t = 8 * University degree									-0.926
									(1.136)
Constant	60.996***	60.983***	60.984***	61.014***	61.012***	60.979***	61.957***	61.014***	60.993***
	(2.958)	(2.964)	(2.957)	(2.962)	(2.956)	(2.954)	(2.789)	(2.961)	(2.955)
R2 within	0.004	0.004	0.004	0.004	0.004	0.004	0.010	0.004	0.004
R2 between	0.000	0.000	0.000	0.000	0.000	0.000	0.048	0.001	0.000
R2 overall	0.001	0.001	0.001	0.001	0.001	0.001	0.037	0.002	0.001
Mean	63.797	63.797	63.797	63.797	63.797	63.797	63.797	63.797	63.797
Number of observations	13,601	13,601	13,601	13,601	13,601	13,601	13,601	13,601	13,601
Number of individuals	731	731	731	731	731	731	731	731	731

Note: Standard errors in parentheses, clustered at individual level. All regressions include individual-specific fixed effects. +, *, ** and *** denote 10 %, 5 % , 1 % and 0.1 % significance level. *t* = x represents 30-day intervals since lockdown (with reference date March 13, 2020). Reference category *t* = -15 till *t* = -3 Binary control variables include being part of the Covid-19 risk group, children living in the same household, having a partner or being married, income brackets, the employment states unemployed, job seeker in training, and other, the meteorological seasons, being observed within the first three months of GJSP participation, and in the first year of GJSP participation, educational attainment. Only persons who have at least one observation before and after the lockdown are included.

Table A 13: Individual-specific fixed effects regressions, momentary mood assessment: sleepy

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
t = -2	0.310	0.307	0.324	0.310	0.309	0.309	0.324	0.320	0.304
	(0.844)	(0.844)	(0.845)	(0.845)	(0.845)	(0.845)	(0.842)	(0.843)	(0.844)
t = -1	0.437	0.433	0.450	0.438	0.437	0.073	0.463	0.442	0.433
	(0.860)	(0.860)	(0.860)	(0.860)	(0.860)	(0.922)	(0.861)	(0.860)	(0.860)
t = -1 * Covid-19 risk group						1.552			
						(1.749)			
t = 0	-2.950**		-2.128+	-2.927**	-3.041**	-3.025**	-3.368**	-3.082**	-1.744
	(0.990)		(1.178)	(1.051)	(1.120)	(0.996)	(1.114)	(1.035)	(1.358)
t = 0 * 0-15 days since lockdown		-2.254							
		(1.440)							
t = 0 * 16-30 days since lockdown		-3.378**							
		(1.089)							
t = 0 * Female			-1.531						
			(1.423)						
t = 0 * Short-time work within 31 days				-0.154					
				(1.932)					
t = 0 * Children in household					0.257				
					(1.562)				
t = 0 * Covid-19 risk group						0.320			
						(1.876)			
t = 0 * Poor health							1.424		
							(1.472)		
t = 0 * Elevated depression score in 2019								0.785	
								(1.873)	
t = 0 * University degree									-2.228
									(1.453)
t = 1	-3.607***	-3.609***	-3.598***	-3.485***	-3.609***	-3.608***	-3.513***	-3.602***	-3.617***
	(0.952)	(0.952)	(0.952)	(0.998)	(0.952)	(0.953)	(0.953)	(0.952)	(0.952)
t = 1 * Short-time work				-0.877					
				(2.089)					
t = 2	-2.078*	-2.080*	-2.068*	-2.075*	-2.080*	-2.083*	-2.018*	-2.071*	-2.091*
	(0.961)	(0.961)	(0.960)	(0.961)	(0.961)	(0.961)	(0.962)	(0.961)	(0.960)
t = 3	-1.830+	-1.829+	-1.822+	-1.827+	-1.831+	-1.830+	-1.791+	-1.829+	-1.842+
	(1.031)	(1.031)	(1.030)	(1.031)	(1.031)	(1.031)	(1.029)	(1.030)	(1.031)
t = 4	-2.453*	-2.451*	-2.443*	-2.451*	-2.455*	-2.453*	-2.423*	-2.447*	-2.465*
	(1.043)	(1.043)	(1.043)	(1.043)	(1.043)	(1.043)	(1.042)	(1.043)	(1.043)
t = 5	-0.672	-0.670	-0.667	-0.670	-0.674	-0.674	-0.645	-0.672	-0.684
	(1.060)	(1.060)	(1.060)	(1.060)	(1.060)	(1.060)	(1.058)	(1.060)	(1.059)
t = 6	-0.025	-0.024	-0.024	-0.023	-0.026	-0.027	-0.005	-0.035	-0.032
	(0.951)	(0.950)	(0.950)	(0.951)	(0.951)	(0.951)	(0.951)	(0.950)	(0.950)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
t = 7	-1.208	-1.208	-1.208	-1.208	-1.209	-1.210	-1.174	-1.213	-1.219
	(0.985)	(0.985)	(0.984)	(0.985)	(0.985)	(0.986)	(0.982)	(0.986)	(0.985)
t = 8	-0.862	-0.861	0.053	-0.861	-0.595	-1.148	-1.007	-1.484	-0.848
	(1.014)	(1.014)	(1.319)	(1.014)	(1.203)	(1.127)	(1.273)	(1.120)	(1.379)
t = 8 * Female			-1.665						
			(1.736)						
t = 8 * Children in household					-0.739				
					(1.817)				
t = 8 * Covid-19 risk group						1.223			
						(1.993)			
t = 8 * Poor health							0.434		
							(1.730)		
t = 8 * Elevated depression score in 2019								3.392	
								(2.118)	
t = 8 * University degree									-0.045
									(1.757)
Constant	36.934***	36.960***	36.970***	36.937***	36.938***	36.922***	36.785***	36.890***	36.922***
	(2.642)	(2.639)	(2.653)	(2.639)	(2.644)	(2.646)	(2.616)	(2.646)	(2.633)
R2 within	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.007
R2 between	0.004	0.004	0.004	0.004	0.004	0.004	0.012	0.005	0.004
R2 overall	0.002	0.002	0.002	0.002	0.002	0.003	0.006	0.003	0.003
Mean	34.176	34.176	34.176	34.176	34.176	34.176	34.176	34.176	34.176
Number of observations	9,898	9,898	9,898	9,898	9,898	9,898	9,898	9,898	9,898
Number of individuals	629	629	629	629	629	629	629	629	629

Note: Standard errors in parentheses, clustered at individual level. All regressions include individual-specific fixed effects. +, *, ** and *** denote 10 %, 5 % , 1 % and 0.1 % significance level. *t* = x represents 30-day intervals since lockdown (with reference date March 13, 2020). Reference category *t* = -15 till *t* = -3 Binary control variables include being part of the Covid-19 risk group, children living in the same household, having a partner or being married, income brackets, the employment states unemployed, job seeker in training, and other, the meteorological seasons, being observed within the first three months of GJSP participation, and in the first year of GJSP participation, educational attainment. Only persons who have at least one observation before and after the lockdown are included.

Table A 14: Individual-specific fixed effects regressions, momentary mood assessment: awake

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
t = -2	-0.859	-0.854	-0.864	-0.859	-0.855	-0.857	-0.879	-0.868	-0.853
	(0.779)	(0.779)	(0.780)	(0.779)	(0.780)	(0.780)	(0.776)	(0.779)	(0.779)
t = -1	-0.697	-0.690	-0.701	-0.697	-0.695	-0.009	-0.737	-0.701	-0.693
	(0.728)	(0.728)	(0.728)	(0.728)	(0.728)	(0.787)	(0.729)	(0.728)	(0.728)
t = -1 * Covid-19 risk group						-2.931*			
						(1.448)			
t = 0	2.734**		2.334*	2.739**	2.910**	2.906**	2.618**	2.865**	1.321
	(0.880)		(1.072)	(0.933)	(0.964)	(0.911)	(0.970)	(0.903)	(1.181)
t = 0 * 0-15 days since lockdown		1.543							
		(1.303)							
t = 0 * 16-30 days since lockdown		3.463***							
		(0.954)							
t = 0 * Female			0.746						
			(1.268)						
t = 0 * Short-time work within 31 days				-0.035					
				(1.712)					
t = 0 * Children in household					-0.489				
					(1.433)				
t = 0 * Covid-19 risk group						-0.731			
						(1.642)			
t = 0 * Poor health							0.064		
							(1.369)		
t = 0 * Elevated depression score in 2019								-0.777	
								(1.810)	
t = 0 * University degree									2.605*
									(1.286)
t = 1	3.019***	3.023***	3.017***	2.951***	3.026***	3.021***	2.858***	3.015***	3.031***
	(0.842)	(0.843)	(0.842)	(0.883)	(0.843)	(0.843)	(0.842)	(0.842)	(0.842)
t = 1 * Short-time work				0.491					
				(1.778)					
t = 2	1.219	1.223	1.216	1.217	1.229	1.227	1.107	1.213	1.235
	(0.865)	(0.865)	(0.864)	(0.865)	(0.865)	(0.865)	(0.864)	(0.865)	(0.865)
t = 3	1.764*	1.763*	1.762*	1.763*	1.768*	1.765*	1.685+	1.764*	1.778*
	(0.897)	(0.897)	(0.897)	(0.897)	(0.897)	(0.898)	(0.894)	(0.895)	(0.897)
t = 4	1.870*	1.867*	1.868*	1.869*	1.877*	1.870*	1.812*	1.864*	1.883*
	(0.892)	(0.892)	(0.892)	(0.892)	(0.892)	(0.893)	(0.890)	(0.892)	(0.892)
t = 5	-0.087	-0.090	-0.089	-0.088	-0.080	-0.084	-0.155	-0.087	-0.073
	(0.920)	(0.921)	(0.921)	(0.921)	(0.921)	(0.921)	(0.917)	(0.920)	(0.920)
t = 6	0.085	0.084	0.084	0.084	0.090	0.087	0.030	0.094	0.094
	(0.878)	(0.878)	(0.878)	(0.878)	(0.879)	(0.878)	(0.876)	(0.877)	(0.878)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
t = 7	0.591	0.590	0.591	0.591	0.594	0.592	0.523	0.596	0.605
	(0.876)	(0.876)	(0.876)	(0.876)	(0.877)	(0.876)	(0.871)	(0.876)	(0.876)
t = 8	0.373	0.372	0.391	0.373	-0.841	0.595	0.517	0.943	0.518
	(0.853)	(0.853)	(1.173)	(0.853)	(1.012)	(0.943)	(1.023)	(0.931)	(1.226)
t = 8 * Female			-0.034						
			(1.503)						
t = 8 * Children in household					3.357*				
					(1.521)				
t = 8 * Covid-19 risk group						-0.944			
						(1.730)			
t = 8 * Poor health							-0.480		
							(1.550)		
t = 8 * Elevated depression score in 2019								-3.102	
								(1.918)	
t = 8 * University degree									-0.231
									(1.525)
Constant	62.497***	62.453***	62.494***	62.496***	62.502***	62.501***	62.901***	62.536***	62.513***
	(2.546)	(2.545)	(2.549)	(2.545)	(2.556)	(2.556)	(2.517)	(2.550)	(2.543)
R2 within	0.009	0.010	0.009	0.009	0.010	0.010	0.011	0.010	0.010
R2 between	0.001	0.002	0.001	0.001	0.002	0.002	0.023	0.003	0.002
R2 overall	0.003	0.003	0.003	0.003	0.003	0.003	0.015	0.004	0.003
Mean	65.236	65.236	65.236	65.236	65.236	65.236	65.236	65.236	65.236
Number of observations	9,899	9,899	9,899	9,899	9,899	9,899	9,899	9,899	9,899
Number of individuals	629	629	629	629	629	629	629	629	629

Note: Standard errors in parentheses, clustered at individual level. All regressions include individual-specific fixed effects. +, *, ** and *** denote 10 %, 5 % , 1 % and 0.1 % significance level. *t* = x represents 30-day intervals since lockdown (with reference date March 13, 2020). Reference category *t* = -15 till *t* = -3 Binary control variables include being part of the Covid-19 risk group, children living in the same household, having a partner or being married, income brackets, the employment states unemployed, job seeker in training, and other, the meteorological seasons, being observed within the first three months of GJSP participation, and in the first year of GJSP participation, educational attainment. Only persons who have at least one observation before and after the lockdown are included.

Table A 15: Individual-specific fixed effects regressions, momentary mood assessment: restless

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
t = -2	0.377	0.368	0.372	0.376	0.375	0.375	0.395	0.376	0.380
	(0.789)	(0.789)	(0.790)	(0.790)	(0.789)	(0.789)	(0.787)	(0.790)	(0.789)
t = -1	1.458+	1.445+	1.455+	1.457+	1.457+	1.286	1.503+	1.457+	1.459+
	(0.776)	(0.776)	(0.776)	(0.776)	(0.776)	(0.864)	(0.776)	(0.775)	(0.775)
t = -1 * Covid-19 risk group						0.744			
						(1.582)			
t = 0	2.291*		1.006	2.478*	2.209*	1.893+	1.355	2.282*	3.914**
	(0.919)		(1.070)	(0.983)	(1.069)	(0.976)	(0.943)	(0.975)	(1.193)
t = 0 * 0-15 days since lockdown		4.284**							
		(1.353)							
t = 0 * 16-30 days since lockdown		1.069							
		(1.033)							
t = 0 * Female			2.409+						
			(1.395)						
t = 0 * Short-time work within 31 days				-1.268					
				(1.769)					
t = 0 * Children in household					0.228				
					(1.495)				
t = 0 * Covid-19 risk group						1.677			
						(1.887)			
t = 0 * Poor health							3.147+		
							(1.668)		
t = 0 * Elevated depression score in 2019								0.048	
								(1.977)	
t = 0 * University degree									-2.986*
									(1.413)
t = 1	1.247	1.241	1.245	1.511	1.245	1.248	1.431	1.247	1.237
	(0.917)	(0.917)	(0.916)	(0.972)	(0.917)	(0.916)	(0.919)	(0.916)	(0.917)
t = 1 * Short-time work				-1.888					
				(1.701)					
t = 2	0.336	0.329	0.336	0.343	0.333	0.337	0.457	0.335	0.320
	(0.901)	(0.902)	(0.901)	(0.902)	(0.902)	(0.901)	(0.897)	(0.903)	(0.903)
t = 3	1.234	1.236	1.234	1.242	1.232	1.236	1.313	1.233	1.221
	(0.953)	(0.954)	(0.953)	(0.953)	(0.953)	(0.954)	(0.952)	(0.954)	(0.954)
t = 4	0.256	0.260	0.260	0.261	0.253	0.258	0.315	0.255	0.244
	(0.935)	(0.935)	(0.936)	(0.935)	(0.936)	(0.936)	(0.932)	(0.936)	(0.935)
t = 5	0.552	0.556	0.554	0.558	0.550	0.554	0.612	0.552	0.537
	(0.921)	(0.923)	(0.923)	(0.922)	(0.922)	(0.922)	(0.920)	(0.922)	(0.922)
t = 6	0.171	0.173	0.166	0.176	0.170	0.177	0.220	0.171	0.156
	(0.937)	(0.937)	(0.937)	(0.937)	(0.937)	(0.938)	(0.931)	(0.937)	(0.938)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
t = 7	2.159*	2.161*	2.156*	2.160*	2.158*	2.164*	2.236*	2.159*	2.137*
	(0.954)	(0.954)	(0.954)	(0.954)	(0.954)	(0.954)	(0.944)	(0.954)	(0.954)
t = 8	2.628**	2.630**	4.532***	2.629**	2.972**	3.327**	3.090**	2.657*	0.484
	(0.969)	(0.969)	(1.285)	(0.969)	(1.058)	(1.078)	(1.176)	(1.045)	(1.323)
t = 8 * Female			-3.470*						
			(1.639)						
t = 8 * Children in household					-0.953				
					(1.820)				
t = 8 * Covid-19 risk group						-2.990			
						(1.878)			
t = 8 * Poor health							-1.167		
							(1.719)		
t = 8 * Elevated depression score in 2019								-0.159	
								(2.154)	
t = 8 * University degree									3.747*
									(1.634)
Constant	30.007***	30.080***	30.053***	30.014***	30.008***	30.060***	29.658***	30.011***	29.965***
	(5.084)	(5.071)	(5.095)	(5.082)	(5.090)	(5.090)	(4.994)	(5.087)	(5.081)
R2 within	0.008	0.009	0.009	0.009	0.009	0.009	0.011	0.008	0.010
R2 between	0.000	0.001	0.000	0.000	0.000	0.000	0.012	0.000	0.000
R2 overall	0.001	0.001	0.001	0.001	0.001	0.001	0.014	0.001	0.001
Mean	24.428	24.428	24.428	24.428	24.428	24.428	24.428	24.428	24.428
Number of observations	9,898	9,898	9,898	9,898	9,898	9,898	9,898	9,898	9,898
Number of individuals	629	629	629	629	629	629	629	629	629

Note: Standard errors in parentheses, clustered at individual level. All regressions include individual-specific fixed effects. +, *, ** and *** denote 10 %, 5 % , 1 % and 0.1 % significance level. *t* = x represents 30-day intervals since lockdown (with reference date March 13, 2020). Reference category *t* = -15 till *t* = -3 Binary control variables include being part of the Covid-19 risk group, children living in the same household, having a partner or being married, income brackets, the employment states unemployed, job seeker in training, and other, the meteorological seasons, being observed within the first three months of GJSP participation, and in the first year of GJSP participation, educational attainment. Only persons who have at least one observation before and after the lockdown are included.

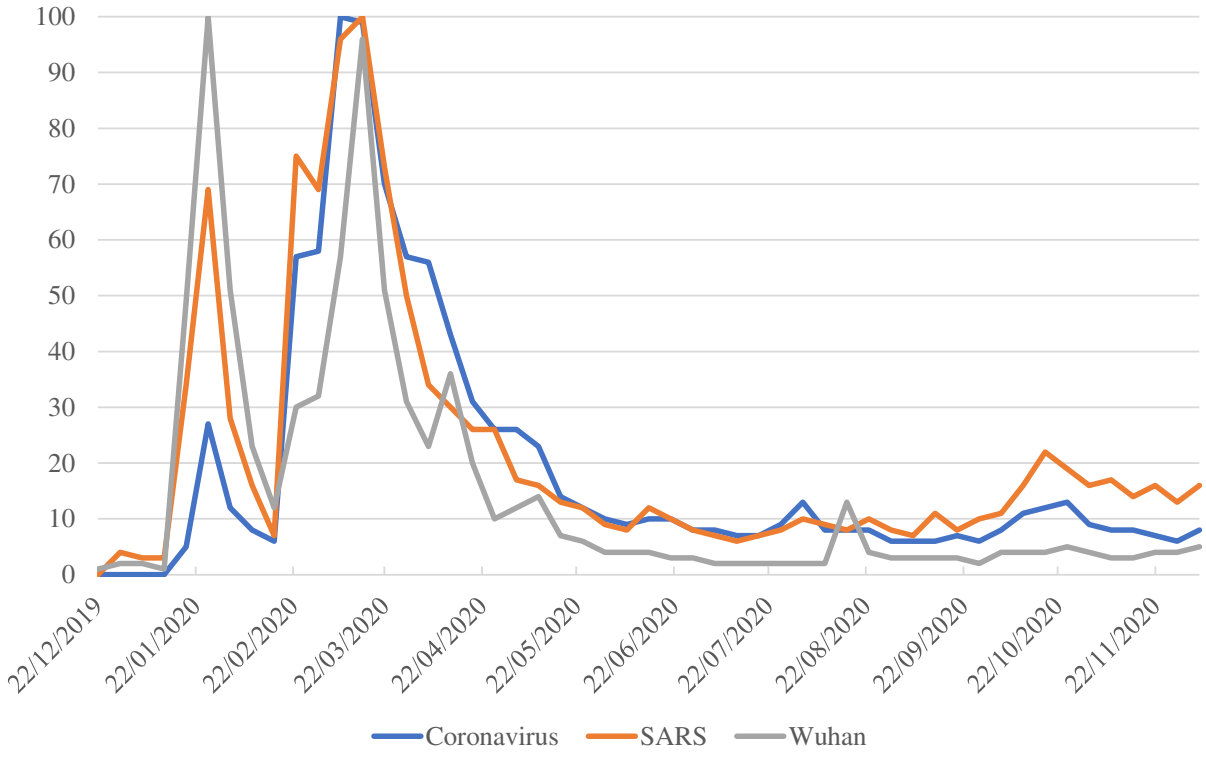
Table A 16: Individual-specific fixed effects regressions, momentary mood assessment: calm

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
t = -2	-0.404	-0.396	-0.394	-0.403	-0.402	-0.401	-0.418	-0.407	-0.413
	(0.769)	(0.769)	(0.770)	(0.769)	(0.769)	(0.768)	(0.764)	(0.769)	(0.769)
t = -1	-1.798*	-1.787*	-1.790*	-1.798*	-1.798*	-1.494+	-1.845*	-1.802*	-1.803*
	(0.727)	(0.728)	(0.728)	(0.727)	(0.727)	(0.783)	(0.729)	(0.726)	(0.727)
t = -1 * Covid-19 risk group						-1.306			
						(1.631)			
t = 0	-1.042		0.534	-1.115	-0.674	-0.584	-0.434	-1.299	-1.755
	(0.899)		(1.060)	(0.959)	(0.986)	(0.948)	(0.986)	(0.960)	(1.206)
t = 0 * 0-15 days since lockdown		-2.833*							
		(1.347)							
t = 0 * 16-30 days since lockdown		0.056							
		(1.000)							
t = 0 * Female			-2.949*						
			(1.346)						
t = 0 * Short-time work within 31 days				0.490					
				(1.678)					
t = 0 * Children in household					-1.054				
					(1.529)				
t = 0 * Covid-19 risk group						-1.935			
						(1.860)			
t = 0 * Poor health							-2.199		
							(1.546)		
t = 0 * Elevated depression score in 2019								1.440	
								(1.773)	
t = 0 * University degree									1.308
									(1.383)
t = 1	-0.133	-0.128	-0.127	-0.405	-0.130	-0.134	-0.342	-0.139	-0.131
	(0.869)	(0.870)	(0.869)	(0.912)	(0.869)	(0.868)	(0.873)	(0.868)	(0.869)
t = 1 * Short-time work				1.952					
				(1.880)					
t = 2	-0.761	-0.755	-0.757	-0.767	-0.757	-0.761	-0.904	-0.767	-0.757
	(0.835)	(0.836)	(0.835)	(0.835)	(0.835)	(0.835)	(0.835)	(0.835)	(0.835)
t = 3	-1.407	-1.410	-1.405	-1.414	-1.404	-1.410	-1.505+	-1.415	-1.404
	(0.890)	(0.891)	(0.891)	(0.891)	(0.891)	(0.891)	(0.890)	(0.890)	(0.891)
t = 4	0.314	0.309	0.314	0.309	0.318	0.311	0.244	0.309	0.316
	(0.925)	(0.925)	(0.927)	(0.926)	(0.926)	(0.926)	(0.923)	(0.926)	(0.926)
t = 5	-0.286	-0.289	-0.285	-0.290	-0.282	-0.287	-0.367	-0.292	-0.279
	(0.878)	(0.879)	(0.879)	(0.878)	(0.878)	(0.878)	(0.879)	(0.877)	(0.878)
t = 6	0.014	0.012	0.018	0.009	0.016	0.008	-0.055	0.007	0.024
	(0.850)	(0.850)	(0.850)	(0.850)	(0.851)	(0.851)	(0.847)	(0.850)	(0.850)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
t = 7	-0.777	-0.780	-0.775	-0.779	-0.776	-0.783	-0.873	-0.782	-0.763
	(0.834)	(0.835)	(0.835)	(0.834)	(0.835)	(0.836)	(0.825)	(0.835)	(0.834)
t = 8	-0.877	-0.879	-2.307+	-0.878	-1.064	-1.604+	-1.819+	-0.865	1.541
	(0.873)	(0.874)	(1.239)	(0.873)	(1.031)	(0.934)	(1.030)	(0.953)	(1.275)
t = 8 * Female			2.608+						
			(1.548)						
t = 8 * Children in household					0.522				
					(1.631)				
t = 8 * Covid-19 risk group						3.111			
						(1.919)			
t = 8 * Poor health							2.448		
							(1.634)		
t = 8 * Elevated depression score in 2019								-0.092	
								(1.964)	
t = 8 * University degree									-4.246**
									(1.552)
Constant	60.181***	60.116***	60.152***	60.176***	60.153***	60.124***	60.661***	60.205***	60.218***
	(3.236)	(3.245)	(3.224)	(3.235)	(3.237)	(3.243)	(3.097)	(3.232)	(3.227)
R2 within	0.006	0.006	0.007	0.006	0.006	0.007	0.010	0.006	0.007
R2 between	0.001	0.001	0.001	0.000	0.001	0.001	0.065	0.000	0.001
R2 overall	0.002	0.002	0.003	0.002	0.002	0.002	0.036	0.002	0.003
Mean	66.419	66.419	66.419	66.419	66.419	66.419	66.419	66.419	66.419
Number of observations	9,899	9,899	9,899	9,899	9,899	9,899	9,899	9,899	9,899
Number of individuals	629	629	629	629	629	629	629	629	629

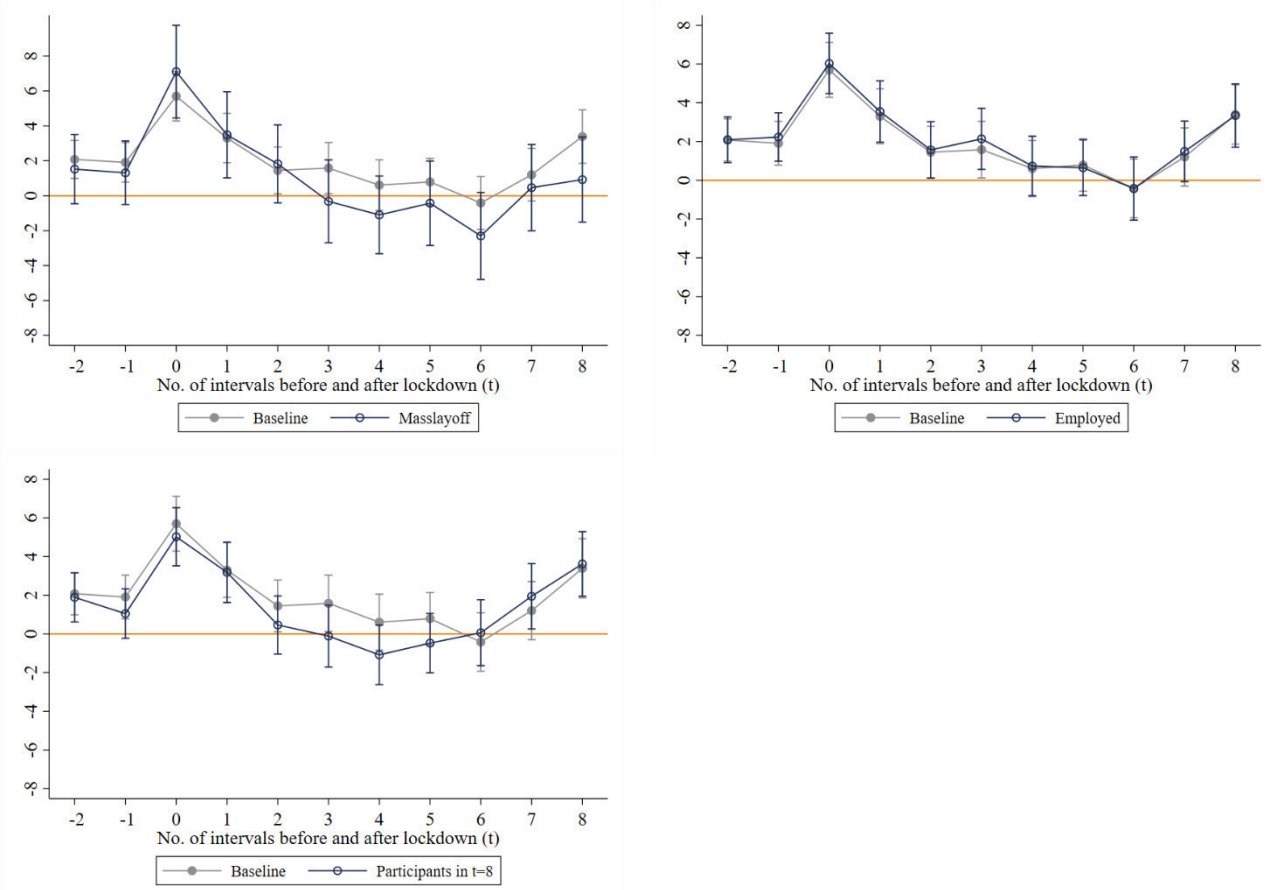
Note: Standard errors in parentheses, clustered at individual level. All regressions include individual-specific fixed effects. +, *, ** and *** denote 10 %, 5 % , 1 % and 0.1 % significance level. *t* = x represents 30-day intervals since lockdown (with reference date March 13, 2020). Reference category *t* = -15 till *t* = -3 Binary control variables include being part of the Covid-19 risk group, children living in the same household, having a partner or being married, income brackets, the employment states unemployed, job seeker in training, and other, the meteorological seasons, being observed within the first three months of GJSP participation, and in the first year of GJSP participation, educational attainment. Only persons who have at least one observation before and after the lockdown are included.

Figure A 1: Covid-19-related google search topics



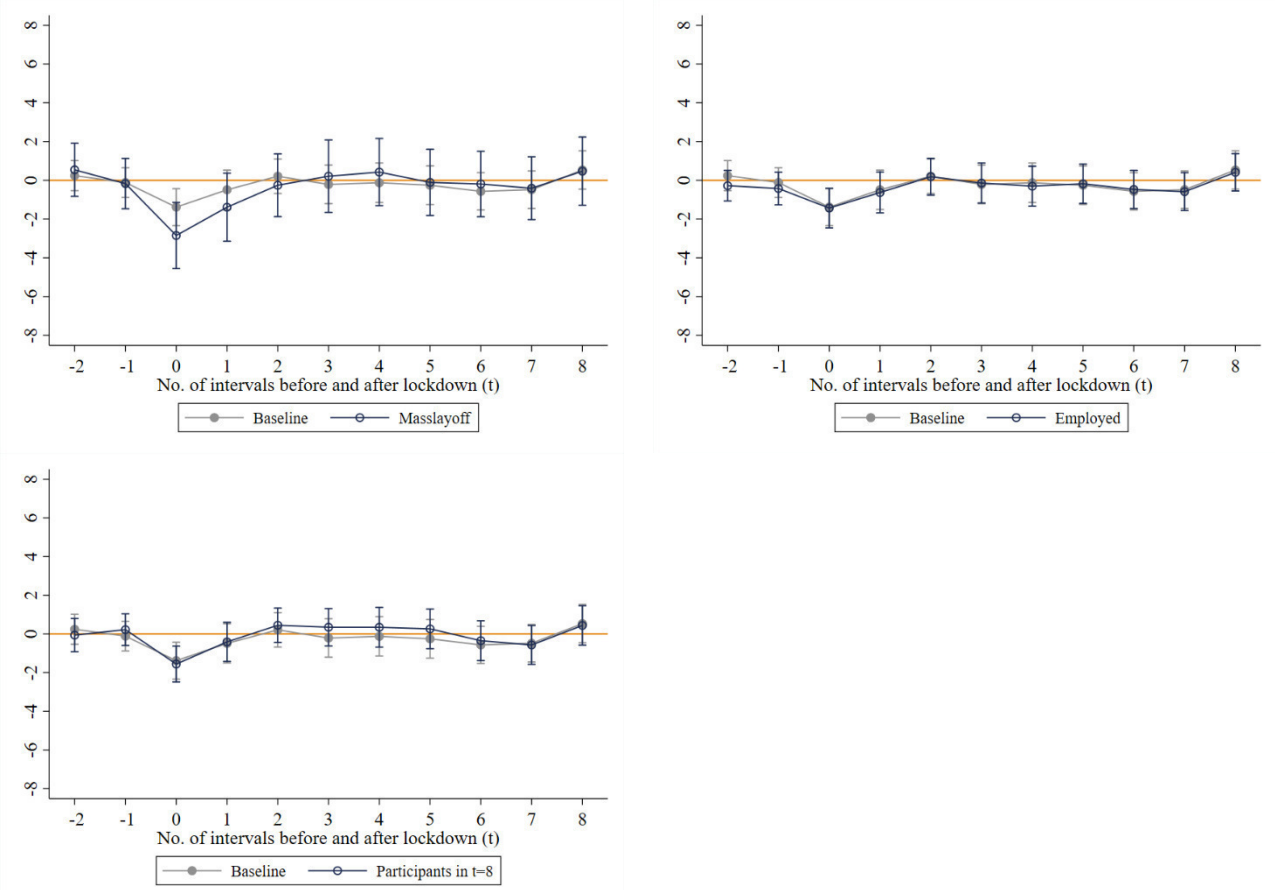
Source: Google Trends.
Note: The figure displays the number of Google searches in Germany for the terms coronavirus, SARS and Wuhan over the course of 2020, as percentage of the peak number of Google searchers over that period of time.

Figure A 2: Sensitivity analysis, depression score



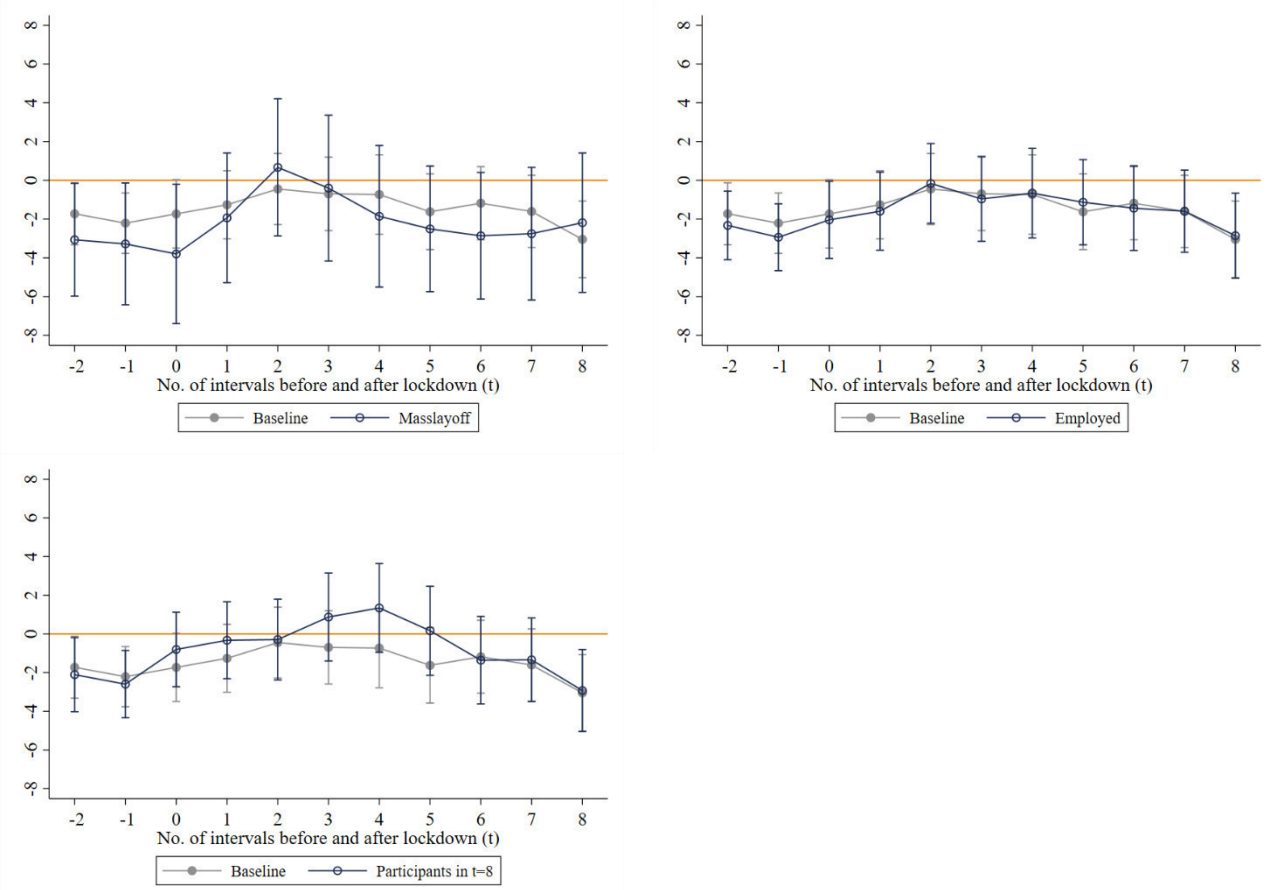
Note: The figure displays individual-specific fixed effects estimates of the sensitivity analysis for mental health. While the grey line depicts the baseline estimation, the blue line depicts estimations for the subsample of people who started participation in the survey due to a masslayoff or plant closure (upper left panel), for the subsample of people who were employed (upper right panel) and for the subsample of people who were still participating during the second wave of the Covid-19 pandemic in $t = 8$ (lower left panel). Binary control variables include being part of the Covid-19 risk group, children living in the same household, having a partner or being married, income brackets, the employment states unemployed, job seeker in training, and other, the meteorological seasons (exept for $t = 8$ participants), being observed within the first three months of GJSP participation, and in the first year of GJSP participation, educational attainment. Whiskers denote 95 % confidence intervals.

Figure A 3: Sensitivity analysis, Satisfaction With Life Scale



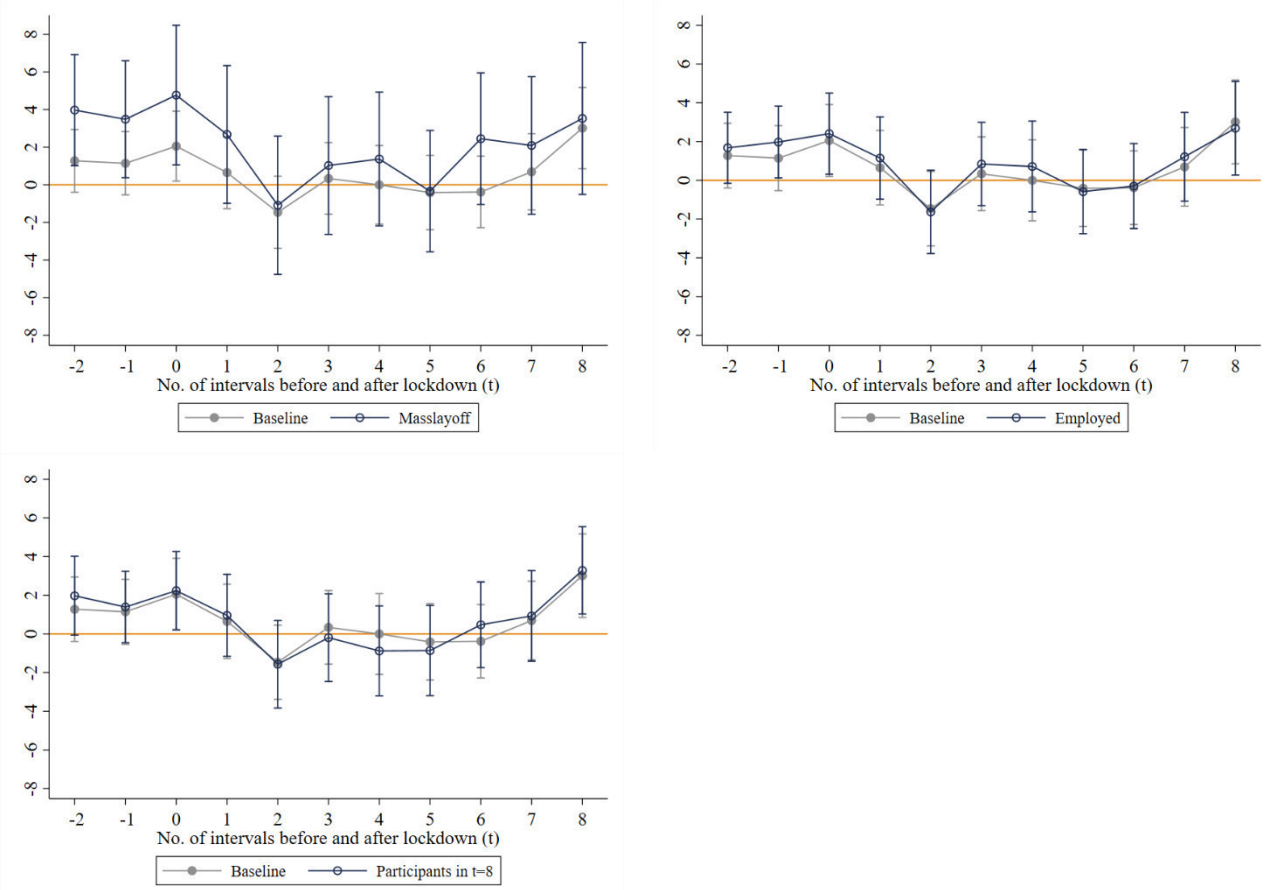
Note: The figure displays individual-specific fixed effects estimates of the sensitivity analysis for Satisfaction With Life Scale. While the grey line depicts the baseline estimation, the blue line depicts estimations for the subsample of people who started participation in the survey due to a masslayoff or plant closure (upper left panel), for the subsample of people who are employed (upper right panel) and for the subsample of people who still participate during the second wave of the Covid-19 pandemic in $t = 8$ (lower left panel). Binary control variables include being part of the Covid-19 risk group, children living in the same household, having a partner or being married, income brackets, the employment states unemployed, job seeker in training, and other, the meteorological seasons (exept for $t = 8$ participants), being observed within the first three months of GJSP participation, and in the first year of GJSP participation, educational attainment. Whiskers denote 95 % confidence intervals.

Figure A 4: Sensitivity analysis, momentary mood assessment: happy



Note: The figure displays individual-specific fixed effects estimates of the sensitivity analysis for momentary mood assessment happy. While the grey line depicts the baseline estimation, the blue line depicts estimations for the subsample of people who started participation in the survey due to a masslayoff or plant closure (upper left panel), for the subsample of people who are employed (upper right panel) and for the subsample of people who still participate during the second wave of the Covid-19 pandemic in $t = 8$ (lower left panel). Binary control variables include being part of the Covid-19 risk group, children living in the same household, having a partner or being married, income brackets, the employment states unemployed, job seeker in training, and other, the meteorological seasons (exept for $t = 8$ participants), being observed within the first three months of GJSP participation, and in the first year of GJSP participation, educational attainment. Whiskers denote 95 % confidence intervals.

Figure A 5: Sensitivity analysis, momentary mood assessment: unhappy



Note: The figure displays individual-specific fixed effects estimates of the sensitivity analysis for momentary mood assessment unhappy. While the grey line depicts the baseline estimation, the blue line depicts estimations for the subsample of people who started participation in the survey due to a masslayoff or plant closure (upper left panel), for the subsample of people who are employed (upper right panel) and for the subsample of people who still participate during the second wave of the Covid-19 pandemic in $t = 8$ (lower left panel). Binary control variables include being part of the Covid-19 risk group, children living in the same household, having a partner or being married, income brackets, the employment states unemployed, job seeker in training, and other, the meteorological seasons (exept for $t = 8$ participants), being observed within the first three months of GJSP participation, and in the first year of GJSP participation, educational attainment. Whiskers denote 95 % confidence intervals.