The Impact of the COVID-19 Lockdown on Collecting Informal Caregiving Data within the LISS Panel in March 2020

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Abstract

In this research note, we assessed whether data on current informal caregiving collected in the LISS panel in March 2020 were structurally biased due to the COVID-19 Spring 2020 lockdown that was implemented during the time of fieldwork. By comparing answer patterns before and after March 15, the date where the first measurements against the spread of the COVID-19 virus were announced by the Dutch government, we conclude that the data collected before and during the Spring 2020 lockdown were not structurally different. Hence, we conclude that the data do not suffer from structural bias.

Introduction

More and more research focuses on caregiving for old and disabled people within the personal network, known as informal care (Moussa, 2019). While the literature on this topic is growing, some aspects of informal caregiving could not yet be researched because of a lack of appropriate data. Especially fine-grained research on caregiving trajectories over the life course, the long-term consequences for employment, and the impact of life-course stages is still missing. We aimed to fill these gaps by collecting retrospective data on caregiving careers. In the first step, in January 2020, we asked all respondents of the Longitudinal Internet studies for the Social Sciences (LISS) panel, administered by CentERdata (Tilburg University, The Netherlands, see www.lissdata.nl and Scherpenzeel & Das, 2010 for more information), if they cared at that moment or had cared in the past for someone in their personal network. In a second

step, all respondents who answered affirmatively to that screening question received an extended questionnaire on their caregiving careers in March 2020.

However, at the same time as our second data collection in March 2020, the COVID-19 pandemic hit the Netherlands to its full extent, and in mid-March, the Dutch government announced measures, called the 'intelligent lockdown', against the spread of the virus. The advice was that people should keep 1.5 meters distance from others, try to have as few social contacts possible, especially with old and sick people, and to stay at home when experiencing (mild) symptoms (Government of the Netherlands, 2020a). A direct effect of such advice on caregiving, which is often characterized by close contact with people in bad health, is certainly conceivable. Furthermore, from March 20 on, visits to nursing homes were not allowed anymore (Government of the Netherlands, 2020b). Therefore, caregivers of people living in nursing homes were not able to take care of their loved ones in the same way as before. Thus, we collected part of our data in a time without COVID-19 restrictions and part of it in a time where people should have kept their distance and reduced social contact with the people they cared for. This could have resulted in different answer patterns for current caregivers when answering our questionnaire in the lockdown, meaning after March 15, resulting in a structural bias in our data on the current caregiving situations. However, respondents could also have answered the questions about their current caregiving situation relating to the 'normal' caregiving situation before the pandemic because even after March 15 the pandemic was still new, abrupt, and unforeseeable. Additionally, it could also be that the caregivers were not yet able to adapt their caregiving situation within the first two weeks of the lockdown and had similar caregiving patterns as before March 15. The latter two arguments give reasons that our data were not biased by the lockdown, whereas the first argument does.

In this research note, we want to assess whether there is a structural bias in the data on current caregiving situations because of the timing of the lockdown and our data collection.

Methods

The complete sample in the March 2020 data collection consists of 7,449 caregiving episodes belonging to 3,023 informal caregivers. We selected the 2,483 *current* caregiving episodes, belonging to 1,617 informal caregivers that completed the questionnaire (N=32 were dropped due to missing end dates). To check whether our data were biased, we compared the answers of respondents who finished filling out the questionnaire before March 15 and those who finished on or after March 15. Figure 1 shows the distribution of the date the respondents finished filling out the questionnaire. We distinguished two types of survey questions to compare the groups on: (1) questions to which the answers could not or were unlikely to have been influenced by the lockdown (e.g., sex or health status of the care recipient) and (2) questions to which the answers could have been biased by the lockdown (e.g., tasks provided). In the first step, we bivariately compared the answer patterns to both types of questions between the respondents who participated before and after March 15 applying multinomial logistic, logistic, or linear regressions (depending on the scale of the response categories) with clustered standard errors (because some respondents had multiple current caregiving episodes). In the second step, we had a further look at the questions to which the answers could have been biased by the lockdown that differed before and after March 15 based on a 5% significance level. For those potentially biased answers, we ran multivariate regressions to check if the potential bias was caused by structural differences between early-participants (participated before March 15) and late-participants (participated on or after March 15) with respect to caregiver characteristics (sex, age, income, work status, and education) as well as their caregiving situation. For the latter, we included the variables that should not have been impacted by the lockdown but were still different for respondents who answered before and after March 15 (relationship to the care recipient and two instrumental activities of daily living, short IADL: household chores and grocery shopping).

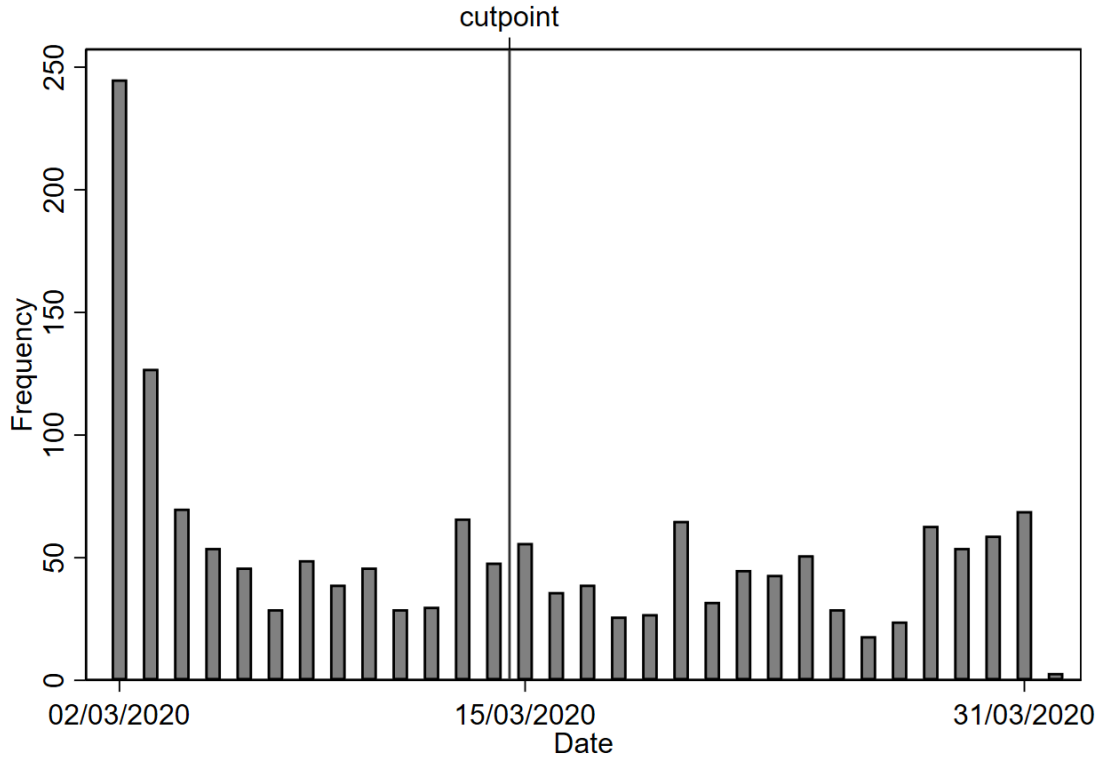

Figure 1. Distribution of the date the respondents with current caregiving episodes finished filling out the questionnaire. The vertical line marks the cutpoint for the analysis (before and on or after March 15). N= 1.617 caregivers*;* 2,483 caregiving episodes.

Results

Table 1 gives an overview of significant, bivariately tested, differences between caregivers who responded before and after March 15 with respect to their answers to questions that were supposedly not influenced by the lockdown. We found no significant differences concerning care recipients' sex, memory issues, mental health, living situation, and age. For two questions we found significantly different answer patterns. First, the relationship with the care recipient was different. Respondents who answered after March 15 less likely cared for a partner, sibling, step-sibling, or neighbor than for a parent, compared to respondents who answered before March 15. Second, respondents who answered after March 15 less often cared for a care recipient who had difficulties with independently taking care of household chores and cared

more often for someone that had difficulties with grocery shopping (IADL), compared to respondents who answered before March 15.

Table 1. Overview of significant differences between caregivers who responded before and after March 15 in answers to questions that could not or were unlikely to have been impacted by the lockdown

Variable	Significant differences before (=ref. cat.) and after March 15
Relationship to the care recipient	Compared to parents (=ref. cat.):
	partner -0.41**
	sibling -0.50**
	stepsibling -13.50***
	neighbor -0.36*
Sex care recipient	ns
Memory issues care recipient	ns
Mental health care recipient	ns
(I)ADL care recipient	
walking	ns
getting dressed	ns
eating	ns
household	yes -0.19*
grocery shopping	yes 0.19*
food preparation	ns
no issues with the above	ns
Living situation care recipient	ns
Age care recipient	ns

Note: ns stands for not significant; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

Table 2 provides the overview of significant differences between the two groups of respondents regarding the answers to the questions that potentially could have been biased by the lockdown. When we found a difference that was bivariately significant at a 5% level, we ran a multivariate analysis controlling for background variables (sex, age, income, work status, education) and the variables that were unlikely to be biased but differed significantly between the two groups

of respondents (relationship to the care recipient, IADL household chores, and IADL grocery shopping; see also Table 1). We found no significant differences between respondents who answered before and after March 15 in terms of caregiving intensity, tasks, and several caregiving experiences. For some questions, we did find significant differences. First, with respect to help received from other helpers, we found in our bivariate analysis that caregivers who answered after March 15 more often indicated to not have any other source of help in their caregiving situation, compared to caregivers who answered before March 15. However, this difference was no longer significant in the multivariate model and hence spurious. Second, we found five significant differences in answers regarding scales on caregiving experiences. Compared to caregivers who answered before March 15, caregivers who answered after March 15 (i) more often *(strongly) agreed* rather than *neither agreed nor disagreed* with the statement that caregiving gives them a good feeling; (ii) more often indicated to *(strongly) disagree* but also to *agree* rather than *neither agree nor disagree* with the statement that they found the interaction with the care recipient difficult; (iii) more often used the answer category *don't know* rather than *neither agree nor disagree* in their response to the classical burden scale ("I find providing help to <<name care recipient >> hard"); (iv) more often *agreed* rather than *neither agreed nor disagreed* with the statement that they felt appreciated by their social network for the care they provided; and (v) less often *strongly agreed* rather than *neither agreed nor disagreed* with, but also more often answered *don't know* to, the statement that they received support from their social network in taking over tasks other than the informal care provided to the care recipient. For three of the questions (ii, iii, and v) differences between the early and late-participants remained statistically different in the multivariate models that included the relationship to the care recipient, the care recipient's IADL that differed between the two groups (household chores and grocery shopping), as well as the background variables of the caregivers.

Table 2. Overview of significant differences between caregivers who responded before and after March 15 in answers to questions that were possibly biased by the lockdown

Variable	Significant differences before (=ref. cat.) and after March 15	Significant differences before (=ref. cat.) and after March 15 in multivariate analysis
Intensity	ns	
Caregiving tasks		
company	ns	
transport	ns	
doctor visits	ns	
administration	ns	
household	ns	
personal care	ns	
nursing	ns	
coordination care	ns	
other	ns	
sum of tasks	ns	
Help from others		
other informal caregiver	ns	
volunteer	ns	
formal home care	ns	
private worker	ns	
healthcare facility	ns	
no other help	yes 0.22*	Not anymore
Caregiving experiences		
problems with combining care with other tasks	ns	
caregiving gives good feeling	Compared to neither agree nor disagree (=ref. cat.): agree 0.30* strongly agree 0.31*	Not anymore

difficulties with interactions with care recipient	Compared to neither agree nor disagree (=ref. cat.): strongly disagree 0.39** disagree 0.49** agree 0.46*	Compared to neither agree nor disagree (=ref. cat.): strongly disagree 0.38* disagree 0.42* agree 0.40*
less contact with friends	ns	
learned new things	ns	
caregiver burden	Compared to neither agree nor disagree (=ref. cat.): don't know 0.96*	Compared to neither agree nor disagree (=ref. cat.): don't know 1.26*
closer relationship with care recipient	ns	
restricted in choices in life	ns	
appreciation by social network	Compared to neither agree nor disagree (=ref. cat.): agree 0.24*	Not anymore
loneliness	ns	
support from social network	Compared to neither agree nor disagree (=ref. cat.): strongly agree -0.69* don't know 0.55*	Compared to neither agree nor disagree (=ref. cat.): strongly agree -0.71*
relationship to partner suffered	ns	
felt obligation	ns	

Note: Tested with robust standard errors applying bivariate and/or multivariate OLS (intensity and sum of tasks), logit (help from others), or multinomial logistic logit (caregiving experiences). Multivariate analysis, for bivariate different factors, were controlled for sex, age, income, work status, education, relationship to the care recipient, IADL household chores, and IADL grocery shopping. *ns* stands for not significant; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

Discussion and Conclusion

In this research note, we assessed whether the data on current caregiving episodes collected in the LISS panel in March 2020 were structurally biased due to the COVID-19 Spring 2020 lockdown that was implemented during the time of fieldwork. We found, after controlling for differences in caregiving situations and background characteristics, that the answers to only three survey questions – or put differently, regarding only five response categories – differed between caregivers who finished the questionnaire before and after March 15. All these variables were centered in subjective scales evaluating their caregiving experiences with no clear pattern in which direction the lockdown would have biased the data. For one survey item (difficulties with interactions with care recipient) agreeing as well as disagreeing was more likely, for the other (caregiver burden) only the don't know category was chosen more often compared to the neutral category, and for the last (support from the social network), only strong agreement (compared to the neutral category) was more likely before than after March 15. For other questions that focus more on objective caregiving characteristics, such as intensity or the tasks provided, we did not find any differences in the answer patterns. All in all, considering that there were many potential outcomes for which we could have found differences before and after March 15, and the fact that we only found three differences, gives us a strong case that the data were not structurally biased. However, we advise interpreting the results from the three items, that have different outcomes before and after March 15, carefully.

References

Government of the Netherlands. (2020a). Aanvullende maatregelen onderwijs, horeca, sport - Nieuwsbericht | 15-03-2020 | 17:35. Retrieved from https://www.rijksoverheid.nl/actueel/nieuws/2020/03/15/aanvullende-maatregelen-onderwijs-horeca-sport

Government of the Netherlands. (2020b). Bezoek aan verpleeghuizen niet langer mogelijk vanwege coronavirus - Nieuwsbericht | 19-03-2020 | 21:11. Retrieved from https://www.rijksoverheid.nl/actueel/nieuws/2020/03/19/bezoek-aan-verpleeghuizen-niet-langer-mogelijk-vanwege-corona

Moussa, M. M. (2019). The relationship between elder care-giving and labour force participation in the context of policies addressing population ageing: a review of empirical studies published between 2006 and 2016. *Ageing and Society, 39*(06), 1281-1310.

Scherpenzeel, A. C., & Das, M. (2010). True" longitudinal and probability-based internet panels: Evidence from the Netherlands. *Social and behavioral research and the internet: Advances in applied methods and research strategies*, 77-104.