Wales COVID-19 Evidence Centre (WCEC)
Rapid Evidence Summary

What is the cost impact of Long COVID on employment and caring responsibilities?
Report number – RES00038 (April 2022)

Topline Summary

What is a Rapid Evidence Summary?

An **interim evidence briefing** to inform further work and provide early access to key findings. They are based on a **limited search of key resources** and the **assessment of abstracts**. Priority is given to studies representing robust evidence synthesis. No quality appraisal or evidence synthesis are conducted, and the summary should be interpreted with caution.

Background/Aim of the Review

Long COVID is a term used to describe signs and symptoms in adults or children that develop or persist after acute COVID-19. As of March 2022, an estimated 2.4% of the UK population (1.5 million) reported COVID-19 symptoms lasting more than 4 weeks after a confirmed or suspected case of COVID-19 (Office for National Statistics, 2022). This work was conducted following earlier work on the cost impacts of Long COVID on the NHS and social care services (RES00034) that highlighted a lack of evidence.

Key findings

- Only one study was identified, **reporting impacts but not costs**: an online survey with a Belgian sample of patients with Long COVID from 27th January 2021 to 14th February 2021 (Castanares-Zapatero *et al.*, 2021). This study was also found as part of the previous work on cost impacts (RES_00034) and offers findings relevant to the impact of Long COVID on ability to work and social support needs for activities of daily living.
- **No studies were found reporting costs**, however four ongoing studies were identified that may offer evidence to address this research question, due to be completed by 2023

Policy implications

- There is a **lack of evidence for the cost impact of Long COVID on employment and caring responsibilities.**
- The role of **unpaid carers** and cost impact in supporting patients with Long COVID needs further research
- The UK's NIHR programme of research on Long COVID will deliver more findings in 2023 that could address this research question.

This rapid review should be cited as:
RES00038. Wales COVID-19 Evidence Centre. A rapid evidence summary of the cost impact of Long COVID on employment and caring responsibilities. May 2022

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FULL REPORT

1. What is a Rapid Evidence Summary?

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2. Production of this Rapid Evidence Summary

The following individuals were involved in the Rapid Evidence Summary process and production of this report:

- Abraham Makanjuola, a.makanjuola@bangor.ac.uk
- Jacob Davies, jacob.davies@bangor.ac.uk
- Kalpa Pisavadia, k.pisavadia@bangor.ac.uk
- Dr Llinos Haf Spencer, l.spencer@bangor.ac.uk
- Dr Annie Hendry, a.hendry@bangor.ac.uk

3. Requesting stakeholder group(s)

The research question was identified via the WCEC prioritisation process and refined with stakeholder input from members of the Long COVID group of the Welsh Government.

4. Context / Background

This question was derived following a meeting presenting the results of previous work exploring the cost impacts of demands due to Long COVID on NHS and social care services (RES_00034) with the aforementioned key stakeholders on Tuesday 29th March 2022. Limited evidence was found, and stakeholders requested broadening the research question to include the cost impact of Long COVID on employment and caring responsibilities.

Aim of review

It is important to understand the cost implications of Long COVID on employment and caring responsibilities to inform resource planning, employment policy and understand the burden to informal caregivers. This Rapid Evidence Summary aimed to inform a decision-making about progress to a rapid review.

5. Research question(s)

Review question	
What is the cost impact of Long COVID on employment and caring responsibilities?	
Participants	Children and adults with Long COVID and carers (including unpaid children and adult carers)
Intervention / exposure	Suspected or confirmed Long COVID
Comparison	Any or no comparator (as this is a rapid evidence summary)
Outcomes	**Cost impacts** **Loss of Employment** **Productivity losses** **Financial benefits** **Care costs**
Other Study Considerations	
Primary, secondary, grey literature, preprints	

6. Summary of the evidence base

Using the PICO framework outlined above, COVID-19 database searches were conducted to look for relevant papers within the time period from March 2020 to April 2022.

6.1 Type and amount of evidence available

No new studies were found from the rapid evidence search. However, a study included in the previous Long COVID evidence summary (RES_00034) was identified as relevant to the research question.

6.2 Key findings

Only one mixed-method study was identified, a survey with open ended questions conducted on a Belgian sample of patients with Long COVID from 27th January 2021 to 14th February 2021 (Castanares-Zapatero *et al.*, 2021). The sample of patients had either been previously infected with COVID-19 (self-reported or based on a positive test) or had Long COVID

symptoms at the time of patient recruitment. 1,395 responded and after applying exclusion criteria 1,320 participants were included in the final study. The 1,320 respondents all had COVID-19 symptoms for more four weeks. The sample comprised of 75% women and 25% men, 87% who were not hospitalised during the acute phase of COVID-19 and 56% of respondents with a high level of education. This survey study may have been subject to selection bias given that respondents self-selected online to participate. It is possible that only those well enough to fill in the survey, or comfortable with technology responded to the survey. However, the study design was of a high quality according to mixed-method appraisal tool (see appendix).

Effect of Long COVID on ability to work:

- More than 80% of respondents (n=1,076) were in paid employment before being infected with SARS-COV-2 and 30% were working in a healthcare centre (38% of which were nurses).

- 1,076 respondents who were in paid employment before acute COVID-19 infection, 642 (60%) had an incapacity to work due to their Long COVID symptoms.

- Of the 1,076 respondents who were in paid employment:
    - 20.1% (n=216) reported experiencing short symptom duration (1-3 months)
    - 36.8% (n=396) reported experiencing medium symptom duration (3-6 months)
    - 43% (n=463) reported experiencing long symptom duration (more than 6 months).

- 126 respondents were hospitalised with acute COVID-19, 89.7% (n=113) reported an incapacity to work.
- 950 of respondents who were not hospitalised with acute COVID-19, 55.7% (n=529) reported an incapacity to work (p<0.001).
    - Patients experiencing long symptom duration, more frequently reported an incapacity to work (68.5%) than the patients with short (52.8%) or mid (53.3%) symptom duration (p<0.001).

- Overall, **33.5%** of respondents **returned to work in the same capacity** as before contracting acute COVID-19. **26.2% restarted on a part-time basis** and **38% did not return to their** job because of their **health status**. The percentage of respondents who could not resume work because of their health status was **higher amongst hospitalised patients** (**43%** of the **38% who did not return to work**) **than non-hospitalised** (**39.9%** of the **38% who did not return to work**).

- Patients with short symptom duration (1 - 3 months) were the highest proportion to not return to work (50.9%), compared to long symptom duration (more than 6 months) (36.8%) and medium symptom duration (3 - 6 months) (33.9%).

Social support needs for activities of daily living for people with Long COVID:

- 52% (n=686/1,320) of the respondents reported they needed (or had needed) help with activities in their daily life due to their Long COVID. A high percentage of respondents reported needing help with cleaning (86%), preparation of meals (70%)

and transportation/journeys (51%). A higher percentage of hospitalised respondents reported needing help for daily activities than non-hospitalised respondents (hospitalised: 69.5%, non-hospitalised: 49.3%). A higher percentage of hospitalised respondents compared to non-hospitalised respondents needed help for hygiene needs (33.9% vs. 10.3%) dressing (28.9% vs. 9.4%) and transportation/journeys (66.1% vs. 47.3%).

- Duration of symptoms played a role in help needed. Patients with long duration COVID-19 symptoms (≥6 months) reported more frequent help needs than patients with mid or short duration symptoms (long: 57.8%, mid: 47.1%, short: 48.1%). Duration of symptoms was related to needs for transportation/journeys (long: 55.5%, mid: 50.9%, short: 38%) and cleaning (long: 88.7%, mid: 86.4%, short: 76.7%).

- In more than 65% of patient support needs, help was provided by an informal caregiver. The percentage varied from 68% for hygiene care to 82% for transportation/journeys, indicating that **informal caregivers play an important role in the provision of social support.**

- The percentage of patient support provided by **professional caregivers** was very limited for meals (4%) and transportation (3%). The highest percentage of reported patient support needs provided from professional care were hygiene (22%), dressing (19%), and house cleaning (11%).

- The proportion of informal and professional carers who provided help for hygiene and dressing was significantly different between hospitalised and non-hospitalised respondents ($p<0.001$).

- There was no difference in the type of social support received between the different symptom duration groups (short, mid and long).

6.3 Ongoing work

In 2021 the National Institute for Health Research (NIHR) and the UK Research and Innovation (UKRI) awarded £19.6 million and commissioned 15 studies to understand and treat Long COVID. Researchers that have received this funding are in the early stages of their research or currently recruiting participants. At least four of fifteen studies (listed below) will investigate the cost implications of Long COVID:

- Effectiveness and cost-effectiveness of a personalised self-management support intervention for non-hospitalised people living with Long COVID ISRCTN36407216 Current status: Ongoing and Recruiting Overall trial dates 01/08/2021 - 31/07/2023 (Busse, 2021).
- LOCOMOTION: Can we optimise the treatments and services provided across the NHS for Long COVID? ISRCTN15022307 Current status: Ongoing and Recruiting Overall trial dates: 01/08/2021 - 31/12/2023. Includes Evaluating cost-effectiveness of current and alternative care pathways (Paley, 2021).
- Remote Diet Intervention to Reduce Long COVID symptoms Trial: Does weight management improve Long COVID symptoms in people with Long COVID and obesity? ISRCTN12595520 Overall trial dates: 31/03/2021 - 01/11/2023. Includes Cost-effectiveness of the intervention assessed using an economic evaluation (Haggerty, 2021).

- Quality-of-life in patients with Long COVID: harnessing the scale of big data to quantify the health and economic costs NIHR award ID: COV-LT2-0073 Overall trial dates: 01/08/2021 – 31/08/2023 (Eggo, 2021)

- A summary produced by the WCEC outlines Active and Prospective Long COVID research in Wales and provides more detail of these aforementioned studies commissioned by the NIHR (Peters, Edwards, Law, & Cooper, 2021).

6.4 Options for further work

There was insufficient published research findings for a rapid review at this time.

7. Next steps

Following discussion at the stakeholder meeting on 25th April 2022 it was agreed not to proceed to a rapid review for this research question due to a lack of evidence.

8. Acknowledgements

The Wales COVID-19 Evidence Centre (WCEC) would like to thank the stakeholders from the Welsh Government: Mark Walker, Heather Payne, Brendan Collins, and Tracey Williams as well as Lisa Trigg, Social Care Wales and PPI Mari James and Alexandra Strong for their advice and guidance in developing this research question and feedback on findings..

9. Methods used in this Rapid Evidence Summary

COVID-19 specific and general repositories of evidence reviews noted in our resource list were searched on 1st and 5th April 2022. An audit trail of the search process is provided within the resource list (Appendix). Searches were limited to English-language publications and did not include searches for primary studies if secondary research relevant to the question was found. Search hits were screened for relevance by a single reviewer.

Priority was given to robust evidence synthesis using minimum standards (systematic search, study selection, quality assessment, appropriate synthesis). The secondary research identified was not retrieved as full text or formally quality assessed. The included research may vary considerably in quality and the degree of such variation could be investigated during rapid review work which may follow-on. Citation, recency, evidence type, document status and key findings were tabulated for all relevant secondary research identified in this process.

As secondary evidence was limited, a further targeted search for primary studies was conducted to inform options for further work. Findings from such studies have not been tabulated but an indication is given of the amount of literature for different aspects of the question.

Date of Search	1st and 5th April 2022
Search Concepts Used	Long COVID and : Work

	Burden
	Family
	Care
	Employment
	Cost impacts
	Employment loss
	Financial benefits
	Care costs
Search Completed by	Abraham Makanjuola, Kalpa Pisavadia, Jacob Davies; BIHMR

10. Results

Table 1. Summary of review evidence identified

Evidence type	Total identified	Comments
Systematic reviews (SRs)	0	
Rapid reviews (RRs)	0	
Clinical Guidelines (CGs)	0	
Protocols for reviews that are underway	0	
Economic evaluations (EE)	0	
Primary Studies	1	Identified in the previous Long COVID RES
[Other..]		

A more detailed summary of included evidence can be found in Table 2.

Table 2: Summary of included evidence

Primary /Secondary / Tertiary research						
Resource	**Citation**	**Recency (Search dates)**	**Evidence Type***	**Status****	**Key findings from abstracts**	**Reviewer comments**
				Economic Impact		
WHO Global Coronavirus Database	Castanares-Zapatero et al (2021) Long COVID: Pathophysiology – epidemiology and patient needs. Health Services Research (HSR) Brussels: Belgian Health Care Knowledge Centre (KCE). 2021. KCE Reports 344. D/2021/10.273/31.	2021	Mixed-method study	Published	This publication reports on the increasing number of patients reporting long-term effects of COVID-19. Report focuses on three main areas of research: **Research area 1: Literature review on epidemiology and pathophysiology of Long COVID (to understand definition, frequency, common symptoms, risk factors and underlying pathophysiological mechanisms of Long COVID).** • Hospitalised patients during the acute phase, the median reported percentage of persistent symptoms within the first 3 months was 32% (ranging from 5 to 36%). • In studies in which almost all patients have been hospitalised, the median was higher (51%, ranging from 32 to 78%). • Evidence on the prevalence of Long COVID remains limited and insufficient to formulate conclusions. The high heterogeneity of symptoms and high variance of reported prevalences offer difficulties.	**Belgium based study** • Although this publication does not specifically address the cost impacts of Long COVID, it does provide insight into reimbursable Long COVID treatments in Belgium, as well as offering a comprehensive review of existing Long COVID literature. • This review conducted primary research via interviews and online surveys to assess the needs and experiences of patients suffering with Long COVID complaints. • Given the differences between the Belgian and UK health systems, the **findings of research area 3 are not transferrable to this context.**

					- There is still no clear widely accepted definition of Long COVID. Long COVID encompasses distinct phenotypes. - In the **first three months**, the most commonly reported persistent symptoms in the group of Long COVID patients are fatigue (up to 98%), dyspnoea (up to 88%), headache (up to 91%) and taste/smell disorders (up to 55%). **Beyond 6 months,** fatigue (median 51%) and dyspnoea (median 30%) are still reported. - Risk factors to developing Long COVID are still unclear. Those who were not hospitalised reported a higher number of symptoms at the acute phase may be a risk factor. - Although Long COVID is prevalent across all age categories, people aged 35 to 69 years appear to be more likely to be affected. Females seem to be more likely to develop Long COVID than males. **Research area 2: Patient survey and interviews (what are the needs and experiences of patients with Long COVID complaints)?** - Several patients self- diagnosed Long COVID. Some interviewees self-diagnosed by recognising themselves in

					stories on Facebook or internet reports without any certainty or formal diagnosis. • Patients felt there was a lack of awareness on the part of physicians. Uncertainty and lack of awareness of a clear Long COVID diagnosis is having an impact on adequate management of Long COVID-19. • Diagnostics often conducted on a symptom-by-symptom basis. Some patients reported searching for unconventional therapies when traditional medicine is not working. • Variety of symptoms and many uncertainties around Long COVID results in unstandardised treatment approaches, described some interviewees. • Some patients noted Long COVID having a life changing impact due to the associated symptoms. Some patients have had to adapt their activity levels, others face incapacity to work or face difficulties to restarting work. Some patients felt they could no longer resume in their same career function at the same capacity or at all. • **Costs:** some patients reported physicians prescribing several not (fully) reimbursed treatments, raising personal costs. Costs of ambulatory expenses and medical exams	

					have an impact on household budgets of patients. • Patients reported adverse psychological symptoms such as heightened anxiety. **Research area 3: Analysis of current Belgian legislation and reimbursement rules**	

11. About the Wales COVID-19 Evidence Centre (WCEC)

The WCC integrates with worldwide efforts to synthesise and mobilise knowledge from research.

We operate with a core team as part of Health and Care Research Wales, are hosted in the Wales Centre for Primary and Emergency Care Research (PRIME), and are led by Professor Adrian Edwards of Cardiff University.

The core team of the centre works closely with collaborating partners in Health Technology Wales, Wales Centre for Evidence-Based Care, Specialist Unit for Review Evidence centre, SAIL Databank, Bangor Institute for Health & Medical Research/ Health and Care Economics Cymru, and the Public Health Wales Observatory.

Together we aim to provide around 50 reviews per year, answering the priority questions for policy and practice in Wales as we meet the demands of the pandemic and its impacts.

Director: Professor Adrian Edwards

Contact Email:
WC19EC@cardiff.ac.uk

Website: https://healthandcareresearchwales.org/about-research-community/wales-covid-19-evidence-centre

All reports can be downloaded via the WCEC library:

https://healthandcareresearchwales.org/wales-covid-19-evidence-centre-report-library

12. APPENDIX – Resources searched during Rapid Evidence Summary

A single list of resources has been developed for guiding and documenting the sources searched as part of Rapid Evidence Summary. Where relevant, all 'priority resources' will be searched, but not all resources will be searched. Some sources will be searched as part of the subsequent Rapid Review (or Rapid Evidence Map).

Each resource will be recorded as being:
* *searched; nothing found*
* *searched; results found*
* *not searched; not relevant*
* *not searched, maybe relevant*

Resource	Success or relevancy of the retrieval
Priority COVID resources for reviews	
Cochrane COVID Review Bank https://covidreviews.cochrane.org/search/site	Searched, results found
WHO Global Coronavirus Database https://search.bvsalud.org/global-literature-on-novel-coronavirus-2019-ncov/	Searched, nothing found
L*OVE – COVID-19 https://app.iloveevidence.com/loves/5e6fdb9669c00e4ac072701d?population=5e7fce7e3d05156b5f5e032a&classification=systematic-review	Searched, nothing found
VA-ESP https://www.covid19reviews.org/index.cfm	Searched, nothing found
Additional COVID resources for reviews *(Tailor the list according to the topic and potential evidence base. In some cases, it may be preferable to scan the main (generic) source rather than COVID-19 specific product; listed under secondary research)*	
LitCovid https://www.ncbi.nlm.nih.gov/research/coronavirus/	Searched, nothing found
Rolling collaborative review of Covid-19 treatments - Eunethta (Not a searchable database but a list of living reviews) https://eunethta.eu/covid-19-treatment/	Searched, nothing found
EPPI-Centre - Living map of the evidence of studies on COVID-19 identified in MEDLINE and EMBASE, that groups the evidence into broad themes https://eppi.ioe.ac.uk/eppi-vis/Review/Index	Searched, nothing found
For technology / treatment questions	
International HTA database (ITS-HTA) (for technology questions only) https://database.inahta.org/	Not searched, maybe relevant
EUnetHTA – COVID 19 response (not a searchable database but a lists of evidence covering diagnostics and treatments) https://eunethta.eu/services/covid-19/	Not searched, maybe relevant
For topic specific / focused review questions	
COVID-END– Evidence summaries (McMaster Health Forum) (Incorporates multiple COVID-19 resources, including many listed here. May be useful for topic specific/focused questions; may not be useful for border questions) https://www.mcmasterforum.org/networks/covid-end	Not searched, maybe relevant
COVID-19 Evidence Alerts from McMaster PLUS™ Usefulness dependent on topic; may not be user friendly for broad/complicated questions https://plus.mcmaster.ca/COVID-19/	Not searched, maybe relevant
Additional COVID resources for primary studies	

[L*OVE primary studies](https://app.iloveevidence.com/loves/5e6fdb9669c00e4ac072701d?population=5e7fce7e3d05156b5f5e032a&classification=primary-study) https://app.iloveevidence.com/loves/5e6fdb9669c00e4ac072701d?population=5e7fce7e3d05156b5f5e032a&classification=primary-study	Searched, nothing found
[Cochrane COVID-19 Study Register](https://covid-19.cochrane.org/) https://covid-19.cochrane.org/	Searched, results found
[LitCovid](https://www.ncbi.nlm.nih.gov/research/coronavirus/) https://www.ncbi.nlm.nih.gov/research/coronavirus/	Searched, nothing found
Secondary resources for reviews relevant to local/UK context	
United Kingdom Health Security Agency's (UKHSA's) COVID-19 Rapid Reviews https://ukhsalibrary.koha-ptfs.co.uk/covid19rapidreviews/	Searched, nothing found
NICE resources for COVID reviews *Any queries regarding ongoing or planned reviews contact Chris Connell:* [*Chris.Connell@nice.org.uk*](mailto:Chris.Connell@nice.org.uk)	Searched, nothing found
[Healthcare Improvement Scotland – COVID-19: Evidence for Scotland](http://www.healthcareimprovementscotland.org/our_work/coronavirus_covid-19/evidence_for_scotland.aspx) (not a searchable database but a lists Once for Scotland guidance, rapid evidence reviews, NICE rapid guidelines evidence covering diagnostics and treatments) http://www.healthcareimprovementscotland.org/our_work/coronavirus_covid-19/evidence_for_scotland.aspx	Searched, nothing found
[Ireland, HSE Library, Covid-19 Summaries of Evidence](https://hselibrary.ie/covid19-evidence-summaries/) not a searchable database but a list of all summaries of evidence that HIQA have been asked to address) https://hselibrary.ie/covid19-evidence-summaries/	Searched, nothing found
HIQA Health Information and Quality Authority (Ireland) – Rapid reviews https://www.hiqa.ie/reports-and-publications/health-technology-assessment/rapid-review-public-health-guidance	Searched, nothing found
[SAGE](https://www.gov.uk/government/organisations/scientific-advisory-group-for-emergencies) https://www.gov.uk/government/organisations/scientific-advisory-group-for-emergencies	Searched, nothing found
Secondary resources for reviews produced by key international organisations	
NCCMT COVID-19 rapid reviews (Canada): https://www.nccmt.ca/covid-19/covid-19-rapid-evidence-service	Not searched, not relevant
ECDC European Centre for Disease Prevention and Control (COVID-19 outputs) https://www.ecdc.europa.eu/en/publications-data	Not searched, not relevant
CDC centre for Disease Control and Prevention - Guidance for COVID-19 (US) https://www.cdc.gov/coronavirus/2019-ncov/communication/guidance.html	Not searched, not relevant
AHRQ Agency for Healthcare Research and Quality (US) https://www.ahrq.gov/coronavirus/health-systems-research.html	Not searched, not relevant
NASEM The National Academy of Sciences Engineering Medicine - Coronavirus Resources Collection (US) https://www.nap.edu/collection/94/coronavirus-resources	Not searched, not relevant
Australian National COVID-19 Clinical Evidence Task Force - Living Guidelines; mainly treatment https://covid19evidence.net.au/ (*also incorporated in Trip*)	Not searched, not relevant
Secondary research resources for (non-COVID-19) reviews (*Tailor the list according to the topic and potential evidence base, talk to stakeholder before proceeding with this type of search*)	
[Trip](https://labs2020.tripdatabase.com/) (Trip Pro can be accessed by an institutional based subscription based via institution, otherwise use Trip) https://labs2020.tripdatabase.com/	Not searched, maybe relevant

Link to search for COVID-19 related research: https://www.tripdatabase.com/search?criteria=%22covid+19%22+OR+%22novel+coronavirus%22 (As a **covid resource for guidelines** - add an additional COVID search term and filter by UK guidelines, covers NICE, and SIGN. Can also filter for non-UK guidance)	
Cochrane Database of Systematic Reviews (CDSR) https://www.cochranelibrary.com/cdsr/reviews	Not searched, not relevant
Campbell Collaboration https://www.campbellcollaboration.org/better-evidence.html	Not searched, not relevant
JBI (via OVID) (Subscription based service – WCEBC has a subscription)	Not searched, maybe relevant
Epistemonikos https://www.epistemonikos.org/en/advanced_search	Not searched, maybe relevant
PROSPERO https://www.crd.york.ac.uk/prospero/	Searched, nothing found
Pubmed Clinical Queries https://pubmed.ncbi.nlm.nih.gov/clinical/	Searched, nothing found
PubMed Filter by systematic reviews, reviews or meta-analysis once search undertaken https://pubmed.ncbi.nlm.nih.gov/	Searched, nothing found
Additional resources searched	
Google Advanced Search https://www.google.co.uk/advanced_search	Searched, nothing found

Mixed-method appraisal tool table

Category of study designs	Methodological quality criteria	Yes	No	Can't tell
Screening questions (for all types)	S1. Are there clear research questions?	✓		
	S2. Do the collected data allow to address the research questions?	✓		
1. Qualitative	1.1. Is the qualitative approach appropriate to answer the research question?	✓		
	1.2. Are the qualitative data collection methods adequate to address the research question?	✓		
	1.3. Are the findings adequately derived from the data?	✓		
	1.4. Is the interpretation of results sufficiently substantiated by data?	✓		
	1.5. Is there coherence between qualitative data sources, collection, analysis and interpretation?	✓		
2. Quantitative descriptive	4.1. Is the sampling strategy relevant to address the research question?	✓		
	4.2. Is the sample representative of the target population?			✓
	4.3. Are the measurements appropriate?	✓		
	4.4. Is the risk of nonresponse bias low?	✓		
	4.5. Is the statistical analysis appropriate to answer the research question?	✓		
3. Mixed methods	5.1. Is there an adequate rationale for using a mixed methods design to address the research question?	✓		
	5.2. Are the different components of the study effectively integrated to answer the research question?	✓		
	5.3. Are the outputs of the integration of qualitative and quantitative components adequately interpreted?	✓		

			✓		
	5.4. Are divergences and inconsistencies between quantitative and qualitative results adequately addressed?		✓		
	5.5. Do the different components of the study adhere to the quality criteria of each tradition of the methods involved?		✓		