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Gendered impact of COVID-19 containment measures on unpaid care work and mental health in Europe: a scoping review protocol

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ABSTRACT

Introduction Women are more likely than men to provide unpaid care work. Previous research has shown that lack of support for various forms of unpaid care work and work-family conflicts have negative impacts on caregivers' mental health, especially among female caregivers. COVID-19 containment measures may exacerbate existing gender inequalities both in terms of unpaid care work and adverse mental health outcomes. This scoping review protocol describes the systematic approach to review published literature from March 2020 onwards to identify empirical studies and grey literature on the mental health impact of COVID-19 containment measures on subgroups of unpaid caregivers at the intersection of gender and other categories of social difference (eg, ethnicity, age, class) in Europe.

Methods and analysis This scoping review is informed and guided by Arksey and O'Malley's methodological framework. We will search the databases Medline, PsycINFO, Scopus, CINAHL, Social Sciences Abstracts, Sociological Abstracts as well as Applied Social Sciences Index & Abstracts (ASSIA) and hand-search reference lists of selected articles to identify relevant peer-reviewed studies. We will conduct a grey literature search using Google Scholar and targeted hand-search on known international and European websites and include reports, working papers, policy briefs and book chapters that meet the inclusion criteria. Studies that report gender-segregated findings for mental health outcomes associated with unpaid care work in the context of COVID-19 containment measures in Europe will be included. Two reviewers will independently screen all abstracts and full texts for inclusion, and extract general information, study characteristics and relevant findings. Results will be synthesized narratively.

Ethics and dissemination This study is a review of published literature; ethics approval is not warranted. The findings of this study will inform public health research and policy. The results will be disseminated through a peer-reviewed publication and conference presentations.

STRENGTHS AND LIMITATIONS OF THIS STUDY

- ⇒ This scoping review is the first to identify and map evidence on gender differences in unpaid caregiving and related adverse mental health outcomes in the context of COVID-19 containment measures in Europe.
- ⇒ This study employs a rigorous and established methodology for conducting scoping reviews following Arksey and O'Malley as well as its methodological enhancement by Levac *et al*.
- ⇒ We will search seven electronic databases and hand-search reference lists to identify relevant studies without applying language limitations complemented by a grey literature search on Google Scholar and targeted hand-search on relevant websites.
- ⇒ As the outbreak of COVID-19 was declared a pandemic not so long ago, it is not possible to assess medium-term or long-term impacts of containment measures on unpaid care work and caregivers' mental health.
- ⇒ This study is limited to studies and reports in Europe which restricts the transferability of results to other geographical regions.

INTRODUCTION

The introduction of COVID-19 containment measures in European countries in March 2020 has resulted in increased demand for unpaid care work, especially for those with existing caregiving obligations towards small children and persons in need of personal care. Unpaid care work—unpaid services to household members, relatives and friends including both caring for other people (eg, childcare, looking after members of the extended family) and reproductive work (eg, household responsibilities, day-to-day shopping)—is predominantly performed by women.[1 2] Reasons for the gendered division of unpaid care work are often rooted in cultural and institutionalised gender norms.[3] In addition to gender, other categories of social differentiation such as age, ethnic origin, migration status, sexual orientation, disability and various living circumstances (eg, employment status, type of paid work, income, living with a partner and/or children, care arrangements, housing characteristics) may be relevant for the uptake of and burden resulting from unpaid care work.[4]

The annual Gender Equality Report of the European Union (EU) 2021 shows that childcare and housework duties are unevenly distributed between gender groups.[5] Prior to the outbreak of the pandemic, women in the EU spent an average of 13 hours more time on unpaid care work per week compared with men (38 hours vs 25 hours).[6] Among employed couples with children aged 12 years and younger, women spent 20 more hours on unpaid care work than men, while men spent an average of 10 more hours on paid work compared with women.[7] The gender care gap translates into gender differences in labour market participation: women more often work part-time, contributing to gender gaps in employment, pay and pensions.[5]

Another type of unpaid care work is informal caregiving to sick, disabled or elderly family members or friends. According to the 2016 European Quality of Life survey, informal caregiving is largely performed by women: overall, 20% of female respondents provided informal care compared with 15% of male respondents. The largest gender difference was observed in the 50–64 age group (28% of women, 17% of men). The gender gap in informal caregiving was also observed among the population in employment: altogether, 19% of employed women provided informal care compared with 15% of employed men. Again, the gender difference was highest among employees with caregiving responsibilities in the 50–64 age group (27% employed women vs 17% employed men).[8] These findings suggest that over their life course, female caregivers are simultaneously or partially exposed to the combined burden of unpaid care work and paid work.

The reconciliation of unpaid care work and paid work is rendered difficult by sociostructural contexts.[9 10] Paid work structurally requires a dispensation from responsibility for care work while at the same time being a central prerequisite for securing one's means of subsistence, especially in old age.[11 12] Previous research has shown that work-family conflicts, as well as long and delimited working hours have negative impacts on unpaid caregivers' mental health.[13–15] Across European countries, informal caregivers report lower levels of mental well-being when compared with non-caregivers, especially when they are female and provide intensive care.[16–18]

Policy measures to contain the spread of the COVID-19 virus, including contact restrictions, closures of workplaces, educational, leisure and cultural institutions, childcare and other care facilities, may exacerbate existing gender inequalities in unpaid caregiving and mental health. According to the first wave of Eurofound's COVID-19 online survey (April/May 2020), women spent more hours per week on unpaid care work compared with men. This includes childcare (12.6 hours vs 7.8 hours for men), informal caregiving (4.5 hours vs 2.8 hours for men) as well as housework and cooking (18.6 hours vs 12.1 hours per week for men). The second wave of Eurofound's online survey (July 2020) revealed that employed women with children under 12 years of age spent an average of 54 hours per week on childcare (compared with 32 hours for employed men). Regardless of employment status, working and non-working women spent more time on childcare and housework than men.[19]

According to the concept of intersectionality, one's social location is influenced by interlocking systems of privilege and oppression (eg, (hetero-)sexism, classism, ableism, racism, ageism) that are not simply additive, but interact in complex and uneven ways.[20] Gender inequalities need to be addressed at the intersection to other social categories of differentiation (eg, ethnicity, immigration status, age, economic position) as intersections of social locations might heighten the risks for adverse mental health outcomes for subgroups of unpaid caregivers.

Early research from Europe indicates a differential impact of COVID-19 containment measures by ethnicity and socioeconomic status. A study from Berlin, Germany, shows that COVID-19 outbreaks are clustered in neighbourhoods with higher proportions of migrant residents.[21] In the UK, racialized and migrant population groups were more likely to experience economic hardship,[22] showed a greater decline in subjective well-being[22 23] and a higher death rate after being tested positive for COVID-19 compared with white British people.[24] Migrant population groups are more likely to have occupations in lower paid and precarious essential fields.[25] They may be less affected by COVID-19-related furlough policies, layoffs and loss of earnings,[26] but they are at a higher risk of contracting the virus. In Germany, healthcare workers—a majority of which are female and migrant women in the EU[5]—contracted COVID-19 five times more often compared with other occupational groups.[27] Living in high-density households and having chronic medical conditions are risk factors for reduced subjective well-being during the COVID-19 pandemic.[28] These factors in turn are more likely to apply to migrant and lower income population groups.[25]

The aim of this research study is to map the evidence on the gendered and intersectional impact of COVID-19 containment measures in Europe with regard to unpaid care work and mental health. An intersectionality approach allows researchers and policy makers to understand the social and economic consequences of COVID-19 for women, men and gender-diverse persons, including where vulnerabilities coincide and where they diverge.[29] We expect that COVID-19-related containment measures will differentially impact unpaid caregivers at the intersection of gender, ethnicity, immigrant status, class and other social categories. As none of these intersectional social locations (eg, a middle-class migrant mother) represent a homogenous group, further aspects such as socioeconomic characteristics (eg, employment status, working hours, housing), living circumstances (eg, living with a partner, living with small children) and public and labour market policies (eg, provision of public childcare, long-term care arrangement, reconciliation measures) that may impact the way policy measure affect caregivers' mental health must be taken into consideration. In addition to these social and systemic factors, caregiving characteristics (eg, type of unpaid care work, intensity of caregiving, relationship to care receiver, absence/presence of illness or disability of care receiver, co-habitation with care receiver) may moderate the mental health impact of unpaid care work under COVID-19 containment measures.

The COVID-19 pandemic is a very recent and ongoing phenomenon. Due to the potential harmful mental health impact of COVID-19 containment measures on subgroups of unpaid caregivers, we sought to conduct a scoping review. Following the definition of WHO, we understand mental health as the state of well-being in which individuals realise their own abilities, can cope with the normal stresses of life, can work productively and are able to make a contribution to their community.[30] The overall objective is to identify subgroups of caregivers at the intersection of gender and other categories of social differentiation that are most vulnerable to changes in family, social and work life impacted by COVID-19 containment measures. A preliminary search of similar studies was performed via hand-searching unpublished and published systematic and scoping reviews on the topic in scientific registers, selected databases and on Google Scholar. To our knowledge, this scoping review is the first to identify and map evidence on gender differences in unpaid caregiving and related adverse mental health outcomes in the context of COVID-19 containment measures in Europe.

Objectives

This scoping review aims to map the current state of research on gender differences in the impact of changes on unpaid care work and caregivers' mental health related to COVID-19 containment measures, specifically to:

1. identify changes in the distribution of unpaid care work between gender groups under COVID-19 containment measures;
2. describe the impact of these changes on the mental health of various subgroups of caregivers;
3. identify population groups that are particularly affected by restrictions in the context of combating the pandemic and changed requirements in unpaid care work;
4. provide recommendations for future public health research and potentially beneficial gender-equality measures during and after the COVID-19 pandemic.

METHODS AND ANALYSIS

This scoping review consists of a systematic database search complemented by a grey literature search on Google Scholar and a targeted hand-search on relevant websites. The database search is conducted according to the methodological framework for scoping studies proposed by Arksey and O'Malley[31] and its enhancement by Levac *et al*[32] consisting of the following five stages: (1) identifying the research question; (2) identifying relevant studies; (3) study selection; (4) charting the data; (5) collating, summarising and reporting the results. The Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews is used to ensure rigour and replicability of the scoping review (the checklist is available as an online supplemental appendix A).[33] The literature searches will be completed in the spring of 2022 and subsequent analyses of the findings will be completed in the summer of 2022. Policy measures to contain the spread of COVID-19 have affected individuals with unpaid care responsibilities globally. Our study focuses on findings from European countries. Although COVID-19-related containment measures were similar on a global scale, there are substantial differences in reconciliation measures, long-term care, healthcare and other social security systems depending on the geographical region. Within Europe, we expect more homogeneity in terms of policies and arrangements compared with other geographical regions.[34] As national policies might differ in terms of support arrangements for unpaid caregivers, we will reflect on differences within European countries in our main manuscript.

Stage 1: identifying the research question

The research question was developed and refined in a collaborative effort by the research team (HG, RB, MAM, PR, TS, HT-G and KP). The review is guided by the first research question: What are the impacts of COVID-19 containment measures on the distribution of unpaid care work between gender groups? The second research question is: What are the mental health effects of these changes on subgroups of unpaid caregivers at the intersection of gender and other categories of social differentiation? We define unpaid care work as unpaid services to household members, relatives and friends including both caring for other people (eg, for children, the elderly, disabled or ill) and reproductive work (eg, household responsibilities, grocery shopping). In line with the WHO definition,[30] we will apply a broad operationalisation of mental health including objective measures and self-reported symptoms or disorders, as well as parameters of caregiver burden. We will include any type of COVID-19 containment measures introduced in Europe since March 2020.

Stage 2: identifying relevant studies

The database search strategy includes searching for research evidence in seven electronic databases and hand-searching reference lists of relevant studies. We will include peer-reviewed original research articles via systematic database search and exclude other publication types (eg, methods reports, conference papers, commentaries, letters, opinion pieces, theses). Reference lists of the selected studies will be hand-searched to identify further eligible references. The search will be limited to references published since March 2020. This date was chosen because it is representative of the time when the

Table 1 List of search themes and search terms for the search strategy

	Search themes	Search terms
(1)	Unpaid care work	((“Caregivers”[MeSH] OR “Work-Life Balance”[MeSH]) or ((informal OR unpaid OR family OR familial OR spous*) adj3 (care or carer* or caregiver* or caregiving or care-work or “care work” or “care giver*” or care-giver* or care-giving or “care giving”)) or ((unpaid OR unwaged OR domestic OR reproductive OR family OR familial) adj3 (work or worker* or labor or labour or laborer* or labourer*)) or (childcare or “child care” or child-care or elder-care or “elder care” or housework or household or work-life-balance or “work-life balance” or work-family-conflict or “work-family conflict” or work-to-family-conflict or “work-to-family conflict” or “family nursing” or “family-centered nursing” or “family centered nursing”)
(2)	COVID-19 containment measures	(((“Coronavirus”[MeSH] OR “COVID-19”[MeSH] OR “SARS-CoV-2”[MeSH]) OR (COVID-19 OR COVID-19 OR “COVID-19 19” OR coronavirus* OR corona-virus* OR “corona virus*” OR 2019-nCov OR "2019 nCov" OR sars-cov-2 OR “sars cov 2” OR “pandemic” OR “Severe Acute Respiratory Syndrome Coronavirus 2”)) AND (lockdown* OR lock-down* OR “lock down*” OR shutdown* OR shut-down* OR “shut down*” OR quarantine* OR “containment measure*” OR “shelter-in-place order*” OR “stay-at-home order*”))
(3)	Mental health outcomes	((“Mental Health”[MeSH] OR “Mental Disorders”[MeSH] OR “Psychological Distress”[MeSH] OR “Stress, Psychological”[MeSH] OR “Anxiety”[MeSH] OR “Anxiety Disorders”(MeSH] OR “Caregiver Burden”[MeSH]) OR (“mental health” OR “mental disorder*” OR “psychological distress” OR “psychological stress” OR “anxiety” OR “anxiety disorder*” OR “caregiver burden” OR “psychological burnout” OR burnout OR “mental wellbeing” OR “mental stability” OR “mental balance” OR “mental health problem*” OR “emotional suffering” OR burden OR exhaustion OR stress OR “psychosocial risk factor” OR “psychosocial impact” OR “psychosocial problem” OR wellbeing OR well-being OR “life satisfaction” OR “quality of life” OR depression OR depressive OR psychosocial OR psychological OR mental OR emotional))

MeSH, Medical Subject Headings.

first COVID-19 containment measures were introduced in Europe. The databases Medline, PsycINFO, Scopus, CINAHL, Sociological Abstracts, Social Services Abstracts and Applied Social Sciences Index & Abstracts (ASSIA) will be searched using English search terms. These sources were chosen after assessing their thematic relevance and coverage of the literature based on the guidance from a librarian. The research questions and key concept definitions are used to establish the search strategy for electronic databases (table 1). The search strategy will initially be developed on the Medline database (via OvidSp) and converted for each following database. To this end, titles and abstracts will be searched for using search terms of themes (1) and (2) combined with the Boolean operator AND. If further specification is needed, search terms of theme (3) will be added. Medical Subject Headings terms will be translated into subject headings and thesaurus words for other databases. Adjacency operators (within three words between) will be translated into appropriate operators for other databases. The proposed search strategy is shown in online supplemental appendix B.

Articles must meet the eligibility criteria defined by population, exposition, comparison, outcomes and setting as shown in table 2. All study designs will be included.

Stage 3: study selection

The study selection is an iterative process consisting of two main stages: (1) title and abstract screening and (2) full-text review. After exclusion of duplicates, titles and abstracts of identified references will be screened by two independent researchers applying predefined inclusion and exclusion criteria. After screening of an initial 20% of the identified search results, the research team will discuss any challenges or uncertainties related to the inclusion and exclusion criteria to reach a consensus. The search strategy will be refined if needed. Next, two reviewers will independently review the full articles for inclusion. In both stages, disagreements between two researchers will be discussed. Where consensus is not reached, a third reviewer will be consulted to determine final inclusion.

Table 2 Population, exposition, comparison, outcomes, setting

Population	Persons who provide unpaid and non-professional care work.
Exposition	Any type of COVID-19-related containment measures.
Comparison	Outcomes must be reported by gender to allow for between-gender comparison.
Outcomes	Any type of mental health measures including indicators of mental well-being (eg, subjective well-being, aspects of life satisfaction, happiness), mental disorders (eg, diagnoses of depression, schizophrenia, burnout, anxiety disorders; self-reported (symptoms) of mental disorders, use of mental health services, use of medications for mental disorders; help-seeking behaviour regarding mental health problems, number of medical referrals for treatments of mental disorders; self-reported limitations in daily activities due to mental disorders; substance abuse including alcohol abuse) and perceived caregiver burden.
Setting	Europe.

Stage 4: charting the data

In this stage, data from the included studies will be extracted. To this end, the research team will develop and continually update a data-charting form to display study characteristics and main results. Study characteristics will include: author(s), publication year, country/region, time period, study design/research methods, study population characteristics, type of COVID-19 containment measure(s), type/definition of unpaid care work, mental health outcome(s), gender differences in outcome parameters and results by subgroups of unpaid caregivers. Main results will include key findings and policy recommendations. The data extraction form will be tested by two independent reviewers separately extracting data from a sample of included articles. After discussing and refining the approach, data extraction will then be conducted by two independent reviewers. Results of the data extraction will be compared and discussed within the research team.

Stage 5: collating, summarising and reporting results

The findings of the scoping review will provide an overview of the research with emphases on categories of social differentiation that intersect with gender. To this end, data will be analysed and summarised descriptively, presented in tables and graphs as well as summarised in text following a narrative method. According to our primary research question, we will describe changes in the prevalence and intensity of unpaid care work resulting from COVID-19 containment measures. We will then depict the impact of these changes on the mental health of caregivers (secondary research question). Findings will be discussed in terms of gender differences at the intersection of further categories of social differentiation to identify subgroups of unpaid caregivers at risk for adverse mental health outcomes. Where possible, we will discuss reported gender differences in unpaid caregiving considering the modalities of caregiving such as the quality of unpaid care work (ie, in terms of the type of tasks performed) and the intensity of caregiving (ie, in terms of time spent on caregiving).

Grey literature search

We will also include grey literature to provide a balanced and complete picture of the available evidence.[35] In line with previous research, we will use Google Scholar to identify relevant grey literature complemented by a targeted hand-search of international and European organisations' and institutions' websites including but not limited to WHO, Organisation for Economic Co-operation and Development, UN Women, European Commission, European Institute for Gender Equality and Eurocarers.[36] We will apply the same inclusion criteria as for the database search (see table 2) for documents published from March 2020 onwards. Key search terms for Google Scholar are derived from the database search strategy and include (a) "unpaid care" or "informal care" or "caregiving" or "caregiver(s)" or "childcare" or "housework", AND (b) "lockdown(s)" or "shutdown(s)" or "quarantine" OR "containment measure(s)" OR "shelter-in-place order(s)" OR "stay-at-home order(s)". Two independent reviewers will screen all records from both searches for eligibility. Selected documents will be limited to government, non-government and international organisation reports, working papers, policy statements and book chapters. Findings from the grey literature search will be reported separately from the systematic database search as we expect methodological differences between peer-reviewed original research articles and grey literature research. A flow diagram of the review process is described in the online supplemental appendix C.

LIMITATIONS

We limit our research to the COVID-19 pandemic. Given that more than 2 years have passed since the introduction of the first pandemic-related containment measures in Europe, our strategy should cover all short-term and medium-term studies related to our research question. However, we will not discover long-term studies or studies related to other global events (and respective global and national policies involved) that may affect unpaid care work provision and its impact on unpaid caregivers' mental health. This scoping review is limited to studies and reports in the geographical region of Europe. We acknowledge that a regional focus on Europe might affect the results of our scoping review in terms of transferability of results to other geographical regions. Comparability of different study results might be limited due to methodological differences, different study populations and heterogeneity across European countries. Emerging differences that might hinder the comparison of findings within studies will be discussed in our main manuscript. As common within scoping studies, we do not assess the quality of included studies.

ETHICS AND DISSEMINATION

As this is a literature search without collection of primary data, a formal ethical approval is not required. We will disseminate our results in the form of an open access publication and international conferences. Findings from this work will also be shared with policy makers, stakeholders and researchers via the Competence Network Public Health COVID-19, a public health research consortium consisting of scientific societies and organisations from Germany, Austria and Switzerland.

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Contributors HG and KP designed the study. HG contributed to the design, in particular in relation to the research questions/objectives, the literature review and by developing the study methods and the search strategy. KP, RB, MAM, TS and HT-G contributed to the design, in particular in relation to the research questions/objectives and the literature review. PR contributed to the design, in particular in relation to the research questions/objectives, the study methods and the database search. HG drafted the first version of the manuscript. RB, MAM, PR, TS, HT-G and KP critically revised the first version and approved the final manuscript.

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REFERENCES

1 Le Bihan B, Martin C, Knijn T, eds. *Work and care under pressure: Care arrangements across Europe*. Amsterdam: Amsterdam University Press, 2013.
2 Pöge K. *Paare in Widerspruchsverhältnissen: die partnerschaftliche Arbeitsteilung von Ärztinnen beim Übergang Zur Elternschaft*. Wiesbaden: Springer Fachmedien Wiesbaden, 2019.
3 Ferrant G, Pesando LM, Nowacka K. *Unpaid care work: the missing link in the analysis of gender gaps in labour outcomes*. Boulogne Billancourt, 2014.
4 Buckingham S, Fiadzo C, Pozzo D V. *Precarious work from a gender and intersectionality perspective, and ways to combat it*. Brussels, 2020.
5 European Union. 2021 report on gender equality in the EU.
6 EIGE, European Institute for Gender Equality. *Gender equality index 2020: key findings for the EU*, 2020.
7 Eurofound. *Sixth European working conditions survey – overview report (2017 update*. Luxembourg, 2017.
8 Eurofound. *European quality of life survey 2016: quality of life, quality of public services, quality of Society*. Luxembourg, 2017.
9 Krüger H. *Geschlecht, Territorien, Institutionen: Beitrag zu einer Soziologie Der Lebenslauf-Relationalität. in: born C, Krüger H, EDS. Individualisierung und Verflechtung: Geschlecht und generation Im deutschen Lebenslaufregime*. Weinheim, München: Juventa, 2001: 254–303.
10 Becker-Schmidt R. Konstruktion und Struktur: Zentrale Kategorien in der Analyse des Zusammenhangs von Geschlecht, Kultur und Gesellschaft. In: Graf J, Ideler K, Klinger S, eds. *Geschlecht zwischen Struktur und Subjekt: Theorie, praxis, Perspektiven*. Opladen: Budrich, 2013: 19–42.
11 Hammerschmid A, Rowold C. *Gender Pension Gaps in Europe Are More Explicitly Associated with Labor Markets than with Pension Systems: DIW - Deutsches Institut für Wirtschaftsforschung*, 2019.
12 BMFSJ, Federal Ministry of Familiy Affairs, Senior Citizens, Women and Youth. *Second gender equality report*. Berlin, 2018.
13 Lacey RE, McMunn A, Webb E. Informal caregiving patterns and trajectories of psychological distress in the UK household longitudinal study. *Psychol Med* 2019;49:1652–60.
14 Sato K, Kuroda S, Owan H. Mental health effects of long work hours, night and weekend work, and short rest periods. *Soc Sci Med* 2020;246:112774.
15 Yucel D, Latshaw BA. Spillover and crossover effects of Work-Family conflict among married and cohabiting couples. *Soc Ment Health* 2020;10:35–60.
16 de Zwart PL, Bakx P, van Doorslaer EKA. Will you still need me, will you still feed me when I'm 64? the health impact of caregiving to one's spouse. *Health Econ* 2017;26 Suppl 2:127–38.
17 Heger D. The mental health of children providing care to their elderly parent. *Health Econ* 2017;26:1617–29.
18 Verbakel E, Tamlagsrønning S, Winstone L, *et al*. Informal care in Europe: findings from the European social survey (2014) special module on the social determinants of health. *Eur J Public Health* 2017;27:90–5.
19 Eurofound. *Living, working and COVID-19: COVID-19 series*. Luxembourg.
20 Iyer A, Sen G, Ostlin P. The intersections of gender and class in health status and health care. *Glob Public Health* 2008;3 Suppl 1:13–24.
21 Senatsverwaltung für Gesundheit, Pflege und Gleichstellung. *Das SARS-CoV-2-Infektionsgeschehen in Berlin – Zusammenhang mit Soziodemografie und Wohnumfeld [The SARS-CoV-2 infection process in Berlin - connection with sociodemographics and living environment*. Gesundheitsberichterstattung Berlin, 2020.
22 Hu Y. Intersecting ethnic and native-migrant inequalities in the economic impact of the COVID-19 pandemic in the UK. *Res Soc Stratif Mobil* 2020;68:100528.
23 Giovanis E. *Income losses and subjective well-being: gender and ethnic inequalities during the Covid-19 Lockdown period in the UK*, 2021.
24 Patel P, Hiam L, Sowemimo A, *et al*. Ethnicity and covid-19. *BMJ* 2020;369:m2282.
25 Lewicki A. *Sind Menschen MIT Migrationshintergrund stärker von Covid-19 betroffen? [Are persons with a migrant background more affected by Covid-19?]: Aktueller Forschungsstand [Current state of research*, 2021.
26 Witteveen D. Sociodemographic inequality in exposure to COVID-19-induced economic hardship in the United Kingdom. *Res Soc Stratif Mobil* 2020;69:100551.
27 Wissenschaftliches Institut der AOK. *Ein Jahr Covid-19 bedingte Fehlzeiten am Arbeitsplatz [One year of Covid-19 related absenteeism from work*. Berlin, 2021.
28 Chen DT-H, Wang Y-J. Inequality-Related health and social factors and their impact on well-being during the COVID-19 pandemic: findings from a national survey in the UK. *Int J Environ Res Public Health* 2021;18:1014.
29 Berkhout SG, Richardson L. Identity, politics, and the pandemic: Why is COVID-19 a disaster for feminism(s)? *Hist Philos Life Sci* 2020;42:49.
30 World Health Organization. Mental health: strengthening our response, 2018. Available: https://www.who.int/news-room/fact-sheets/detail/mental-health-strengthening-our-response [Accessed 15 Jun 2021].
31 Arksey H, O'Malley L. Scoping studies: towards a methodological framework. *Int J Soc Res Methodol* 2005;8:19–32.
32 Levac D, Colquhoun H, O'Brien KK. Scoping studies: advancing the methodology. *Implement Sci* 2010;5:69.
33 Tricco AC, Lillie E, Zarin W, *et al*. PRISMA extension for scoping reviews (PRISMA-ScR): checklist and explanation. *Ann Intern Med* 2018;169:467–73.
34 Vanhercke B, Bouget D, Spasova S, European Commission, Directorate-General for Employment, Social Affairs and Inclusion. *Work-Life balance measures for persons of working age with dependent relatives: a study of national policies 2016*, 2016.
35 Paez A. Gray literature: an important resource in systematic reviews. *J Evid Based Med* 2017;10:233–40.
36 Haddaway NR, Collins AM, Coughlin D, *et al*. The role of Google Scholar in evidence reviews and its applicability to grey literature searching. *PLoS One* 2015;10:e0138237.