

Role of social protection in reducing the burden of public health and social measures during the COVID-19 pandemic

evidence review



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Abbreviations

GDP	gross domestic product
ILO	International Labour Organization
PHSM	public health and social measures
PM-GKY	Pradhan Mantri Garib Kalyan Yojana (India)
PSNP	Productive Safety Net Programme (Ethiopia)
SARS-CoV-2	severe acute respiratory syndrome coronavirus 2
SNAP	Supplemental Nutrition Assistance Program (United States of America)
UN	United Nations
USA	United States of America
WHO	World Health Organization

Glossary

Adapted social protection policies and programmes¹	Social protection policies and programmes that were in existence prior to the COVID-19 pandemic and were expanded by increasing benefits, relaxing eligibility criteria, and/or increasing the scale of coverage.
Contingencies²	These are social risks covered by social protection programmes, for example the contingency covered by pension schemes is old age, while unemployment benefits cover the inability to obtain suitable employment in the case of a protected person who is capable of, and available for, work.
Health equity (inequity)³	The absence (presence) of unfair, avoidable or remediable health differences among groups of people, where those groups are defined socially, economically, demographically or geographically or by other dimensions of social inequality.
Health inequality⁴	In some countries the term health inequality is used to refer to the same concept of health inequity. However, WHO uses the term health inequality in the measurement discourse to identify differences in a property of health or its determinants. These measures and related indicators are important for describing health inequities. The term "inequality" used to describe the conditions of a society as a whole, often evokes inequities related to wealth, income, social status or discrimination.
Informal work⁵	Refers to all work, including self- and wage employment, for which remuneration is received but is not registered, nor protected by legal or regulatory frameworks, as well as to non-remunerative work in an income-generating company. Workers in the informal sector do not receive any employment-related benefits or social protection and do not have workers' representation or secure contracts.
In-cash benefit	Cash benefits that are not reimbursements (i.e. they do not require beneficiaries to show evidence of expenditure).
In-kind benefit (goods)¹	Any benefit received by a beneficiary that is a good (e.g. food, assistive device, funeral costs).
In-kind service¹	Any benefit received by a beneficiary that is a service (e.g. health care, social care).
In-kind voucher¹	Any benefit received by a beneficiary as a voucher to access a defined good or service or as reimbursement for a good or a service.
In-cash (old age)¹	Any benefit received by a beneficiary as an old age pension in cash.
Labour market interventions¹	These include job protection schemes, such as short-term work, job protection and unemployment benefits.
Moratorium on evictions or rent relief	Protection of tenants from being evicted due to unpaid rent or measures to reduce or defer rent payments.

Newly introduced social protection policy or programme¹	Programmes that were newly implemented to address increased needs during the emergency.
Existing social protection¹	Already existing social protection policies and programmes that were not changed.
Public employment programme¹	Government programme offering employment opportunities to certain categories of people who are unable to find other employment.
Public health and social measures (PHSM)¹	Nonpharmaceutical interventions implemented by individuals, communities or governments during health emergencies to reduce the risk and scale of transmission of infectious diseases and used to address various modes of transmission. PHSM play a critical role throughout the different stages of health emergencies, when used alongside medical countermeasures, and help to reduce the burden on health systems, economies and societies. Examples of PHSM include handwashing, mask-wearing, physical distancing, school and business measures, modifications of mass gatherings, and international travel and trade measures.
Social assistance⁶	The provision of social security benefits financed from the general revenue of a government rather than by individual contributions, with benefits adjusted to a person's needs. Many social assistance programmes are targeted at those individuals and households living under a defined threshold of income or assets. Social assistance programmes may focus on a specific risk (e.g. families with children) or on particularly vulnerable groups (e.g. impoverished older people).
Social protection or social security¹	Social protection, or social security, is a human right and is defined as the set of policies and programmes designed to reduce and prevent poverty, vulnerability and social exclusion throughout the life cycle. Social protection includes nine main areas: child and family benefits, maternity protection, unemployment support, employment injury benefits, sickness benefits, health protection (i.e. medical care), old-age benefits, invalidity or disability benefits, and survivor's benefits. Social protection systems address all these policy areas using a mix of contributory schemes (i.e. social insurance) and noncontributory tax-financed benefits (i.e. including social assistance).
Social determinants of health⁷	The conditions in which people are born, grow, work, live, and age, and the wider set of forces and systems shaping the conditions of daily life. These forces and systems include economic policies and systems, development agendas, social norms, social policies and political systems. These forces and systems are sometimes referred to as the social determinants of health equity or "structural" determinants.
Social assistance – categorical scheme¹	A scheme that provides benefits to vulnerable groups (i.e. all people who belong to a certain category are eligible, for example, all children or all people aged 65 years or older or all pregnant women).
Social assistance – universal scheme¹	A scheme that provides benefits under the single condition of residence (i.e. all people can access a given benefit, such as universal basic income).
Social assistance – means-tested scheme¹	A scheme that provides benefits upon proof of need and targets certain categories of individuals or households whose means fall below a certain threshold (i.e. only people or households below a certain income or consumption threshold are eligible).

Social insurance¹	Contributory social protection scheme that offers guarantees through an insurance mechanism based on: (i) the payment of contributions before the occurrence of the insured contingency (ii) the sharing (or pooling) of risk and (iii) the notion of a guarantee.
Unintended negative consequences of PHSM implementation	Impacts of PHSM on individuals and societies that are not related to the transmission of disease, including health, social and economic consequences; examples of unintended negative consequences include income loss, poor mental health and well-being, food insecurity, increased gender and social inequities, and disruption of routine health programmes.
Utility or financial fee waiver	Any benefit through which the beneficiary receives a fee waiver to access a defined good or service, such as utilities or the reimbursement of a good or a service.
Vulnerable and at-risk populations	Several studies in this review used these terms but did not define vulnerability clearly. In public health, this commonly refers to susceptibility to disease owing to other comorbidities or genetic or health status factors. Less common in public health is to use the term to refer to groups experiencing higher rates of exposures to pathogens or environmental health risks. In the social protection literature, vulnerability often refers to a reason why a group merits social protection – that is, the beneficiaries merit social protection for specific reasons related to their group identity, such as their likelihood of experiencing poverty, unemployment, hunger, poor health, stigma or discrimination, or difficulty accessing services. For the purposes of this review, if studies reported social protection measures targeting specific groups and characterized them broadly as vulnerable, the study was most commonly referring to the reason for applying social protection to that group. Where possible, we refer to the reason concretely if it was given; where it was not, we use the phrase “vulnerable and at-risk groups”. In social epidemiology, expression “groups living in conditions of vulnerability” is preferred.

- 1 World Social Protection Report 2020–22: social protection at the crossroads – in pursuit of a better future. Geneva: International Labour Organization; 2021 (<https://www.ilo.org/media/376971/download>, accessed 10 July 2024).
- 2 Relevance of ILO Social Security (Minimum Standards) Convention, 1952 (No. 102) to Strengthen the Social Security System in China. Geneva: International Labour Organization; 2022 (https://www.ilo.org/sites/default/files/wcmsp5/groups/public/%40asia/%40ro-bangkok/%40ilo-beijing/documents/briefingnote/wcms_836498.pdf, accessed 16 July 2024).
- 3 Health equity: overview [website]. Geneva: World Health Organization; 2024 (https://www.who.int/health-topics/health-equity#tab=tab_1, accessed 10 July 2024).
- 4 Health inequities and their causes [website]. Geneva: World Health Organization; 2018 (<https://www.who.int/news-room/facts-in-pictures/detail/health-inequities-and-their-causes>, accessed 16 July 2024).
- 5 Guidelines concerning a statistical definition of informal employment: the Seventeenth International Conference of Labour Statisticians (ICLS). Geneva: International Labour Organization; 2003 (<https://www.ilo.org/resource/guidelines-concerning-statistical-definition-informal-employment-0>, accessed 28 May 2024).
- 6 Social protection assessment-based national dialogue: a global guide. Geneva: International Labour Organization; 2017 (<https://www.ilo.org/publications/social-protection-assessment-based-national-dialogue-global-guide>, accessed 16 July 2024).
- 7 Social determinants of health: overview [website]. Geneva: World Health Organization; 2024 (https://www.who.int/health-topics/social-determinants-of-health#tab=tab_1, accessed 16 July 2024).

Executive summary

In response to the COVID-19 pandemic, countries implemented public health and social measures (PHSM), also known as nonpharmaceutical interventions, at unprecedented scale and for unprecedented durations to reduce the transmission of the virus that causes the disease and its impact on populations. During this exceptional global health crisis, more than 7 million deaths and more than 775 million cases have been reported to date.¹ While PHSM were effective in curbing the outbreak, some also had unintended negative consequences on the livelihoods and well-being of individuals, as well as on societies and economies. The global health crisis reversed about 3 years of progress made on reducing poverty, with the number of people living in extreme poverty rising to 724 million. Negative consequences for livelihoods and income varied substantially among individuals. Influential socioeconomic factors included the type of employment, and the coverage and comprehensiveness of social protection. In many contexts, the implementation of PHSM imposed a socioeconomic burden on people, and this burden often led to unintended consequences for health and health equity by adversely impacting the social determinants of health.

Yet socioeconomic impacts on people could have been worse. Much was done by countries, their people and their governments to mitigate the negative impacts of the COVID-19 pandemic and PHSM. One important course of action taken by countries was to expand existing social protection policies or implement new interventions to protect people's livelihoods in an effort to ease the socioeconomic burdens experienced during the pandemic. Social protection policies and systems, including protection from financial hardship due to health care expenditures under universal health coverage, are well-established public policy instruments for shielding a population's livelihood from both unforeseen and predictable life events. Social protection measures aim to diminish and



Combining PHSM and social protection measures to reduce unintended negative consequences during health emergencies

¹ As of 3 July 2024, available via the WHO COVID-19 dashboard: number of COVID-19 cases reported to WHO [online database]. Geneva: World Health Organization; 2024 (<https://data.who.int/dashboards/covid19/cases?n=o>)

prevent poverty, vulnerability and social exclusion across all stages of life and thereby fulfil a basic human right to social security. They are also an essential policy response to promote positive social determinants of health. Thus, it is timely for decision-makers to consider how overall social protection policy is an important instrument for population health, both generally and also specifically during health emergencies and the implementation of PHSM.

Purpose and scope

The purpose of this scoping review is to systematically identify the social protection measures used during the COVID-19 pandemic and analyse how they mitigated the unintended negative consequences of PHSM. The approach uses the lens of the social determinants of health and the taxonomy of social protection policy measures to ground the review in a multisectoral approach. This report is directed at decision-makers and community leaders involved in implementing PHSM and social services during health emergencies and those interested in understanding how social protection measures can mitigate the socioeconomic consequences of PHSM throughout the health emergency management cycle.

Establishing an evidence base for the impacts of the social protection measures used during the COVID-19 pandemic creates foundational knowledge, which increases awareness among health and social policy actors about the interlinkages between health emergency preparedness and responses and their socioeconomic consequences, and it familiarizes health professionals with the concepts and terminology of the social protection sphere. Ultimately, this scoping review seeks to facilitate the systematic integration of social protection measures into planning for, implementing and evaluating pandemic responses.

This scoping review provides an inventory of the global literature on the social protection measures that were in place, scaled or initiated during the COVID-19 pandemic, analysing 316 studies covering 1 079 social protection policies and programmes from 123 countries. Altogether 523 of the reviewed social policy measures had been newly introduced during the pandemic, with most of them being in-cash benefits for families ($n = 309$). Similarly, the majority of the 272 expanded policies consisted of in-cash benefits for families ($n = 131$). The inventory identified different types of social protection benefits, such as in-cash support ($n = 742$) and in-kind support ($n = 230$), general labour and fiscal measures ($n = 24$), waivers of utility or financial fees ($n = 63$) and moratoria on rent or evictions ($n = 20$).

Overview of the “effectiveness” of different social protection benefits

Of the 316 studies documenting social protection measures, 44 provided a comparative assessment of the relationship between social protection and socioeconomic consequences as described by several key social determinants of health. Most of these studies focused on high- and middle-income countries. The main negative consequences of PHSM and the pandemic that were addressed, in order of the number of studies reporting these, were food insecurity ($n = 32$), financial and employment insecurity ($n = 18$), mental and physical health ($n = 15$), quality of diet ($n = 2$), social attitudes and cohesion ($n = 2$), and educational investment ($n = 1$). Most studies assessed the effect of a range of social protection benefits on multiple outcomes. The study designs fell into four categories, of which

natural experiments and (quasi-)experimental studies were considered more robust for causal inference than longitudinal and cross-sectional studies.

While results are grouped by unintended negative consequences addressed and the type of social protection benefit, it is important to note that social protection programmes often consist of multiple components (e.g. a combination of in-cash and in-kind benefits) and, hence, it is not always possible or desirable to fully disentangle the effects of the individual components of an intervention.



Food insecurity

The evidence supports the importance of social protection to sustain food security during emergencies. The more methodologically robust studies especially confirmed positive effects of social assistance, social insurance and other measures on food security across different country income levels.

In-cash benefits: Half of the included studies (11/22) found that cash transfers improved food security, with six out of eight (quasi-)experimental studies showing positive effects. This holds true across income levels. The other half showed mixed or null relationships, but the majority of these ($n = 8$) had a weaker design. Thus, these findings might merely point to the fact that recipients of cash transfers are by far more food insecure than the rest of the population and that the transfers may not have been high enough or frequent enough, or both, to counter the additional burden of the pandemic.

In-kind benefits: Five out of 14 studies, three of which were (natural) experiments, showed positive effects from in-kind support on food security, highlighting the importance of further investigations into the reasons for mixed and null results, including assessing barriers to access and the possibility that benefit types and amounts were inadequate.

Social insurance: Four out of seven studies reported a positive association between social insurance and food security, with one of these showing mixed effects. All three (natural) experiments confirmed the value of social protection. Five studies from the United States of America focused on unemployment benefits, with four of those reducing food insecurity among benefit recipients.

Other measures: Measures such as tax credits ($n = 2$), policies setting a minimum wage ($n = 1$), loans to small business owners ($n = 1$) and a multistimulus programme ($n = 1$) were found to be beneficial for the food security of recipients. One natural experiment evaluating eviction moratoria found mixed effects.

In terms of equity, described as whether some populations with greater need benefitted proportionally, evidence from three studies highlighted the positive effects of these programmes in reducing food insecurity and improving mental health outcomes across different racial, ethnic and socioeconomic groups.



Quality of diet

The sparse evidence ($n = 2$) examining the relationship between social assistance and quality of diet found no effects.



Financial and employment insecurity

The evidence illustrates the beneficial effects of social insurance on financial and employment security, but presents a more mixed picture for other social protection measures. The high ratio of mixed effects is likely due to the measurement of several, very heterogeneous indicators to assess financial and employment insecurity, raising questions about the construct of variables and measurement validity.

In-cash benefits: Only two out of 12 studies showed a clearly positive relationship between cash transfers and financial security; five found mixed effects; four found null effects; and one showed a negative result. Results are independent of country income level. Cash transfers delivered in combination with other measures or more than once, or a combination of these, appeared to yield better results.

In-kind benefits: All programmes ($n = 4$) comprised in-cash and in-kind components; three cross-sectional studies showed mixed effects, and one natural experiment found a positive effect of social protection. All studies were from low- and middle-income countries.

Social insurance: All studies ($n = 3$) found that those who received unemployment benefits were more financially secure and better able to make housing- and rent-related payments than those who were not covered by unemployment insurance. This evidence comes from high-income settings.

Other measures: Three out of six studies – one including an eviction moratorium and two assessing public employment programmes – all of which were quasi-experiments, found a positive effect of social protection on financial and employment security.



Mental and physical health

In line with the pathway of the social determinants of health, the evidence supports a positive effect of social protection on mental and physical health.

In-cash benefits: Studies mostly focused on mental health (7/8 studies). Five studies found a positive relationship between cash transfers and health, and the results of one were inconclusive. It appears that especially in high-income countries the amount of cash transferred was insufficient to fully mitigate the negative effects of the pandemic and PHSM.

In-kind benefits: Two cross-sectional studies from the USA focused on mental health. One found that the provision of Medicaid (i.e. in-kind health insurance benefits provided for low-income individuals) and a ban on utility shut-offs were associated with lower odds of anxiety and depression, while the other did not detect any relationship between social assistance and stress.

Social insurance: The evidence indicated that the availability of social insurance improved mental health ($n = 4$) and health care-seeking behaviour ($n = 1$). All four studies focused on unemployment benefits in the USA.

Other measures: All four of these studies are from the USA, and three found positive effects of eviction moratoria on mental health. A longitudinal study assessing a one-time tax credit found the measure to be beneficial for physical health and in reducing harmful alcohol use, but it was not related to anxiety and the use of illicit drugs.



Social attitudes and cohesion

Two studies from middle-income countries used a quasi-experimental design and found positive relationships between cash transfers and social attitudes, such as support for emergency measures, social cohesion and trust in government, albeit the relationships did not reach statistical significance.



Educational investment

One experiment from Colombia found a positive effect of repeated cash transfers on recipients' investment in their children's education.

Qualitative studies

The qualitative evidence included in this review from 25 studies reinforces the usefulness of social protection for health and points to positive associations between social assistance and food and housing security during the COVID-19 pandemic. Findings also highlighted the power of social protection in allowing vulnerable and marginalized populations to feel included in society. The qualitative studies also unpicked the complexities of providing social protection, including assessing access barriers among different groups, challenges in administering these interventions, particularly in emergency settings, and challenges in identifying the most vulnerable populations.

Conclusion

This review brings added value to goals of strengthening health emergency management not only by taking an expansive approach to identifying social protection measures but also by making explicit linkages to the negative consequences of health emergencies, particularly in the context of attempting to mitigate unintended negative consequences of PHSM. The review focuses on the critical role of social protection measures in safeguarding the well-being and livelihood of individuals and communities during large-scale outbreaks of infectious diseases and provides a strategic evidence base for integrating social protection measures into emergency preparedness, response and resilience.

This review complements existing evidence about monitoring the unprecedented introduction and expansion of social protection measures during the COVID-19 pandemic by adding an assessment of the relative impact of those measures in cushioning the health and socioeconomic impacts of the pandemic. To further strengthen the evidence base about the role of social protection during health emergencies, innovative methods are needed, including multidisciplinary approaches and long-term evaluations of policies and interventions. This knowledge is essential to designing equitable and effective PHSM implementation packages that carefully integrate and balance PHSM, any unintended negative consequences and mitigation measures.

The COVID-19 pandemic exposed the stark inequalities in our society, emphasizing the urgency required to address these disparities during future pandemic responses. Alarming, in the wake of the economic shocks of recent years, the financing gap to achieve the minimum social protection for all has increased by about 30%, excluding 4.1 billion people worldwide from income security and, hence, further increasing their risk for poverty. Looking ahead, social and health policies and investments must be seen as integral components of development with equity. Only then will countries be able to rapidly activate and scale up social protection measures during emergencies, implement PHSM to leverage their public health benefits while reducing unintended negative consequences, and establish robust strategies for health emergency management.

1. Background

1.1 Unintended negative consequences of public health and social measures during the COVID-19 pandemic

Between 2000 and 2016, the world had made substantial progress achieving an increase of more than 8% in life expectancy and healthy life expectancy (1). This increase was due primarily to the progress made in reducing child mortality and fighting infectious diseases in upper-middle-income and high-income countries (1), but it was also linked to advancements made towards achieving the Millennium Development Goals and, later, the Sustainable Development Goals, including aims to reduce poverty and reach zero hunger (2).

The COVID-19 pandemic, which was declared a Public Health Emergency of International Concern on 30 January 2020 (3), required countries to engage in protracted health emergency responses that affected all sectors and spheres of society. During this unprecedented global health crisis, more than 7 million deaths and more than 775 million cases have been reported to date.² The pandemic had devastating consequences for achieving the goals of the 2030 Agenda for Sustainable Development, with much of the past decade's progress being halted or reversed. The COVID-19 pandemic led to massive disruptions of public health programmes and routine health care, resulting in, for example, an increase in the incidence of tuberculosis (4, 5) and deaths from malaria, as well as childhood vaccinations seeing the "largest decline in three decades" (2). It also reversed about 3 three years of progress in reducing poverty, with the number of people living in extreme poverty rising to 724 million in 2020, exceeding projected numbers by 90 million (6). In terms of progress towards ensuring zero hunger by 2030, the pandemic exacerbated the concerning rise since 2015 in food insecurity driven by conflict, climate change and increasing inequalities (6). In 2022, 2.4 billion people were severely or moderately food insecure, meaning that 391 million more people experienced a lack of regular access to sufficient or nutritious food, or both, than in 2019 (6). There were further massive disruptions in education, with educational facilities having been closed temporarily or for extended periods in more than 200 countries, affecting about 94% of students, including 1.58 billion children and young people, as well as their parents and carers (7). COVID-19 also challenged economic development worldwide, with a decrease of 4.1% in real global gross domestic product (GDP) per capita in 2020 followed by a slow recovery in view of concurrent global crises. Millions of people were pushed into unemployment, with a disproportionate share of them being workers in informal employment and women, thus further widening gaps in social and gender inequity (6).

The cross-sectoral, worldwide impact of the pandemic was caused not only by the spread of the virus itself but also by the unprecedented implementation of measures to mitigate and contain transmission

2 These numbers are from 3 July 2024, based on the WHO COVID-19 dashboard, available at <https://data.who.int/dashboards/covid19/cases?n=o>.

of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). Public health and social measures (PHSM), also known as nonpharmaceutical interventions, were widely implemented by individuals, communities and governments to reduce the risk and scale of SARS-CoV-2 transmission by decreasing transmission-relevant exposure, for example by initiating teleworking arrangements, and/or making exposure safer, for example by wearing masks and keeping physical distance (8-10). PHSM were particularly important for decreasing pressure on health care systems by reducing hospitalizations and deaths from COVID-19 during the beginning of the pandemic, when medical countermeasures were not yet available, and also during later stages, when the delivery of effective vaccines and therapeutics was inequitable globally (11) and there was low vaccine acceptance in some communities. PHSM ranged from active case-finding and contact identification to personal protection, such as practising hand hygiene and respiratory etiquette, to social measures, such as physical distancing and modifying school and business activities, to implementing international travel and trade measures (12). PHSM were implemented at various stringency levels, for various durations and in different combinations, resulting in varying degrees of disruption to individuals, societies and economies.

PHSM have been critical countermeasures, alongside medical countermeasures, to contain outbreaks of infectious diseases for decades (13, 14). Also, in the case of the COVID-19 pandemic, the evidence shows that the measures, in particular when introduced in bundles and early on, were effective in significantly reducing the transmission of SARS-CoV-2 (15-17). More specifically, PHSM were associated with lowering SARS-CoV-2 infection rates (18), and decreasing hospitalizations (19) and deaths (20) due to COVID-19, hence saving lives throughout the course of the pandemic.

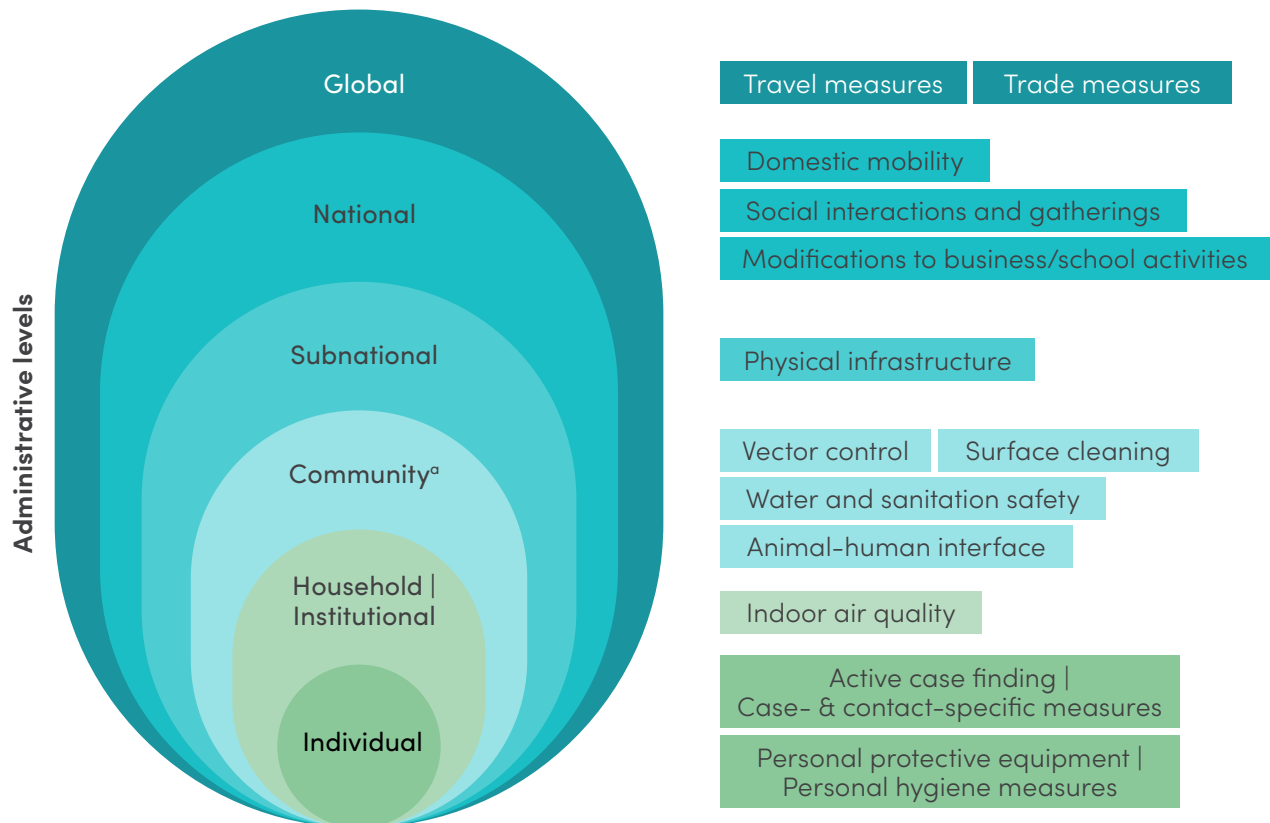
The effectiveness of PHSM hinges substantially on the feasibility, acceptability, and uptake of and adherence to measures by the public,³ and it varies depending on the combination and stringency of measures implemented (8). Whether individuals adhere to PHSM depends not only on their own awareness and motivation but also is determined by their ability to access resources and receive support, as well as environmental conditions. Thus, a person's social and economic conditions greatly shape the extent to which they are able to adhere to PHSM and realize their public health benefits. For example, workers in the informal economy who do not have access to paid sick leave may not be able to adhere to the recommendation to isolate at home when infected with SARS-CoV-2 for fear of losing their job and income. Similarly, a family living in overcrowded housing will face a greater risk of infectious disease transmission, including of COVID-19, during stay-at-home orders than a family with adequate living space. Thus, the inability to adhere to PHSM due to poor living and working conditions, coupled with vulnerabilities – such as age, having a chronic disease or lacking access to health services – increase the risk of exposure to the virus and heightens the risk of severe disease and death (21).

In addition, the prolonged implementation of PHSM was associated with several notable unintended negative consequences (15). While it is challenging to disentangle which health and socioeconomic burdens arose from the COVID-19 pandemic versus from PHSM implemented in response, it is important to recognize how emergency response measures can impact people's lives and livelihoods. Especially highly disruptive PHSM such as restrictions on international or domestic travel and trade and business closures (Fig. 1) can significantly affect people's economic situations and societies through increased unemployment, economic downturns and increased poverty (22, 23). Similarly, the closing of educational facilities contributed to decreased educational attainment, increased risk of violence against children, worsened mental health and well-being of

3 Other factors influencing decisions about PHSM implementation include pathogen characteristics and modes of transmission, and contextual factors (e.g. cultural, socioeconomic, the political context, the availability of medical countermeasures, epidemiological evolution, health care response capacity) (9).

students and families and impaired social development; and the closure of care facilities imposed an additional care burden on parents and extended families, mostly on women (24). Moreover, non-COVID-19-related health outcomes were negatively affected in two significant ways: (i) a decrease in the utilization of health services and the disruption of routine public health programmes increased the burden of other illnesses, particularly within disadvantaged communities; and (ii) a decline in mental health and deteriorating health behaviours were primarily attributed to feelings of loneliness and isolation (21, 25).

Fig. 1. Implementation levels of PHSM

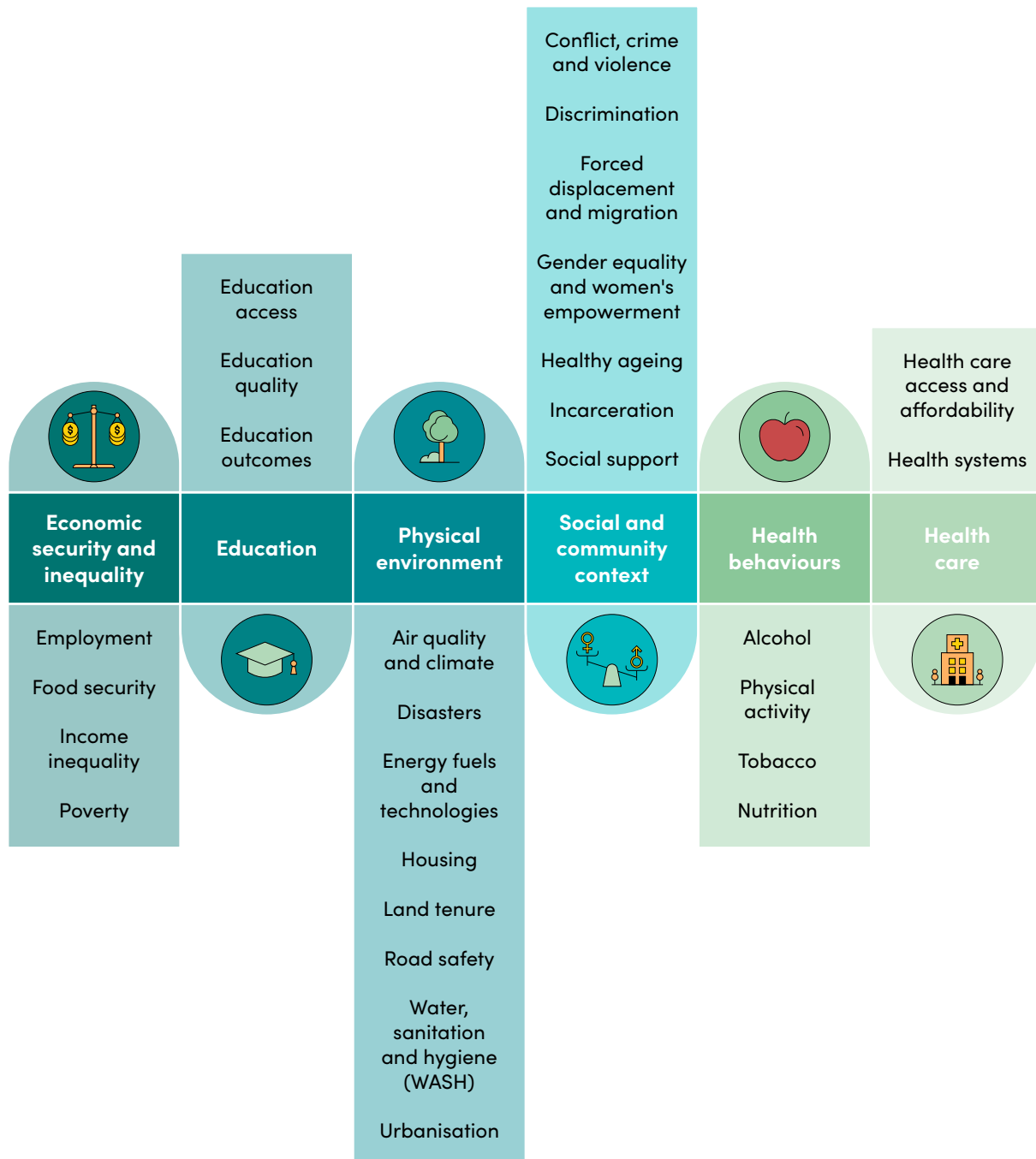


^a Community in the context of PHSM refers to at-risk, affected and vulnerable groups

Source: WHO, developed for this report

Similar to the increased risk of suffering severe consequences from COVID-19, the unintended negative consequences of PHSM also disproportionately affected people living in conditions of vulnerability, including children, women, older people and workers in informal and precarious employment situations (21). This has created a vicious cycle of vulnerable and marginalized communities being underprotected. This has led to further exacerbations of health, social and gender inequalities, as well as inequities, and these have the potential to impact generations to come (21). The social determinants of health – that is, “the conditions in which people are born, grow, work, live and age, and the wider set of forces and systems shaping the conditions of daily life” (26) – provide a helpful lens to understand this dynamic (Fig. 2).

Fig. 2. The social determinants of health



Source: The WHO World Report on the Social Determinants of Health Equity (forthcoming)

Hence, without adequate health and social protection systems and sufficient community infrastructure in place, PHSM cannot be implemented in an equitable and sustainable manner within any country. While it is not possible to weigh the lives saved and morbidity averted by PHSM against economic hardship or morbidity, decision-makers need to ensure that PHSM policies and their implementation are proportional and protect and sustain people’s health, livelihood, well-being and liberty (27).

To foster a more equitable and evidence-informed implementation of PHSM during health emergencies, the World Health Organization (WHO) Initiative to Measure the Effectiveness and Impact of PHSM During Health Emergencies was launched in June 2021 (28). The Initiative

advocates for taking a fair and comprehensive perspective when making decisions about PHSM and encourages multisectoral collaboration to protect everyone, everywhere from epidemics and pandemics and to prevent them from suffering avoidable hardship (Box 1). This includes promoting the implementation of mitigation measures alongside PHSM, such as social protection policies and programmes as well as community-based initiatives (29), and it involves championing equity through taking action on the social determinants of health as part of a multisectoral policy commitment to building strong health systems based on primary health care that are more resilient to crises (21). From this viewpoint, collaboration with the social sector is thereby key to developing scalable social protection measures that can be activated and expanded during an emergency.



Box 1. In context: The WHO Initiative to Measure the Effectiveness and Impact of PHSM During Health Emergencies

The WHO Initiative to Measure the Effectiveness and Impact of PHSM was launched in June 2021 in response to countries' needs for better evidence about the effectiveness and the health, social and economic consequences of PHSM implemented during the COVID-19 pandemic. Its scope has since expanded beyond knowledge generation and research capacity strengthening to also include the development of evidence-informed PHSM implementation tools for multiple infectious disease hazards that have epidemic and pandemic potential. The PHSM Secretariat at WHO works with multidisciplinary and multisectoral partners around the world to:

- accelerate multidisciplinary, multisectoral research assessing the effectiveness of PHSM, unintended negative consequences and implementation strategies;
- strengthen evidence-informed and context-specific PHSM decision-making; and
- promote the effective and equitable implementation of PHSM alongside medical countermeasures for health emergency preparedness and response.

Further information about the Initiative can be found at <https://www.who.int/initiatives/who-public-health-and-social-measures-initiative>

1.2 The role of social protection in health emergency preparedness, response and recovery

Social protection, or social security, is a human right. According to the International Covenant on Economic, Social and Cultural Rights, adopted by the United Nations (UN) General Assembly in 1966, and in which the right to health is located under international law, States have a legal obligation to progressively implement the right to social security to the maximum ability of their resources (Articles 2 and 9). Social protection is defined as the set of policies and programmes designed to reduce and prevent poverty, vulnerability and social exclusion throughout the life cycle (30). It can be provided through cash payments to individuals or through in-kind approaches, such as subsidized child or health care services.

Social protection policies and strategies should aim at universal coverage and adequacy of benefits. These can be achieved through a combination of tax-funded and contributory mechanisms. In social assistance, which is tax-funded support for people in situations of vulnerability, such as living in

poverty or with a disability, targeted approaches are often used to identify beneficiaries, and means-testing and categorical criteria (e.g. age, disability, household structure) are often used to determine eligibility. Social protection encompasses nine broad benefits intended to shield people during various events that can occur throughout the life course, including the birth of a child, unemployment, injury or illness at work or outside of work, old age and loss of the main breadwinner. Under the International Labour Organization's (ILO) Social Security (Minimum Standards) Convention, 1952 No. 102, the types of benefits that can be provided in cash or in kind include child and family benefits (e.g. the cash benefit given to children after they are born), maternity benefits (e.g. compensation for time off work to care for a newborn, access to maternity health care), unemployment benefits (e.g. income support in case of the loss of a job or earnings), employment injury benefits (e.g. income replacement in case of occupational disease or a work-related accident), sickness benefits (e.g. income replacement during absence from work due to illness), medical care, old-age benefits, invalidity or disability benefits, and survivor's benefits (30). Supplementary social security standards, such as the ILO's Employment Promotion and Protection against Unemployment Convention, 1988 (No. 168), include support to return to suitable employment; the Maternity Protection Convention, 2000 (No. 183) extends protection of the employment contract against non-discrimination and of the right to breastfeeding.



Social protection measures to reduce and prevent poverty, vulnerability and social exclusion throughout the life cycle

While the ILO's internationally recognized Social Security (Minimum Standards) Convention prescribes common principles and minimum parameters for setting up effective social protection systems, the design, benefits offered, reach of coverage and financing mechanisms can vary from country to country. In general, social protection measures can be financed through mechanisms such as contributory schemes (i.e. beneficiaries pay into the benefit scheme, as is the case for social insurance) and non-contributory tax-financed benefits (e.g. social assistance; such benefits are often means-tested or categorical in that they are distributed only to those who prove their need to receive the benefits). Overall, countries that provide universal social protection use a mix of financing mechanisms. At the same time, less than half of the world's population enjoys comprehensive social protection, and thus large coverage gaps exist (30).

It is critical to activate social protection policies and programmes alongside PHSM during a health emergency to reduce socioeconomic hardship and to facilitate the acceptability of PHSM policies. In this respect, countries that have a comprehensive social protection system before an emergency are more likely to respond faster (30).

In times of crises and transformation, effective cooperation between the health and social protection systems is especially crucial. The health and socioeconomic strains of an emergency and the related response measures, such as PHSM, exacerbate existing inequities and, hence, place a double burden on populations, worsening hardships for communities that are already vulnerable and marginalized. The benefits of multisectoral cooperation in addressing the broader social determinants of health using social protection measures have been well documented for the tuberculosis and HIV epidemics, showing that social protection benefits had positive impacts, such as by alleviating poverty, improving treatment outcomes and a reduced disease burden (31-34).

The increasing awareness of WHO Member States about the relationship between social protection and the social determinants of health as well as the potential impact of social protection on these social determinants is reflected in the pledge to provide all people who have tuberculosis with social benefits to eliminate financial hardship, which was made by heads of state at the UN General Assembly High-Level meeting on Tuberculosis (5). Similarly, the recently developed global architecture for health emergency prevention, preparedness, response and resilience recognizes that the protection of health cannot be disentangled from the protection of social and economic welfare, mental health, livelihoods, food security and dignity, and the architecture also advocates for multisectoral action to strengthen social welfare and protection, livelihoods, business and education continuity and for ensuring food security (35).

Advocating for social protection, particularly beyond health care protection, is not necessarily something that health actors take the lead on. This practice of advocating to address the social determinants of health by supporting leadership in other sectors forms part of the Health in All Policies approach; Health in All Policies is described by WHO as a way to systematically take into account the health implications of decisions, seek synergies and avoid harmful health impacts in order to improve population health and health equity. It includes an emphasis on assessing the consequences of public policies on health systems, the determinants of health and on well-being (21, 36). In 2021, WHO launched the Special Initiative for Action on the Social Determinants of Health for Advancing Health Equity to improve the impacts of social policies on health equity, and in 2022 WHO developed a joint plan of work with the ILO, under the UN Collaboration on Social Protection, to support work on social protection by building knowledge across health and social policy actors to strengthen a cross-sectoral coalition for building universal social protection systems.

1.3 Rationale for this scoping review

In 2020, prior to the COVID-19 pandemic, approximately half the world had access to at least one social protection measure, with 66% having coverage for health; 33% receiving disability benefits and 29% receiving some form of social assistance, also known as welfare (30). Those proportions hide issues around the adequacy of protection (i.e. the level of the benefits provided). Vulnerable and marginalized communities, such as workers in the informal economy, are often excluded from adequate social protection, depriving them of their human “right to a standard of living adequate for the health and well-being of the individual and their family”, according to Article 25 of the UN’s Universal Declaration of Human Rights (1948). A large-scale crisis such as the COVID-19 pandemic exposes vulnerabilities, exacerbates them and significantly increases the number of people in need of social protection.

As a response to the health and socioeconomic catastrophes caused by the pandemic, many countries expanded their existing social protection policies and programmes or introduced new ones. According to data from the World Bank, a total of 3 856 social protection and labour measures were planned or implemented by 223 economies by January 2022, with an average investment of 2% of an economy’s GDP dedicated to the social protection response to COVID-19, and investments ranged from about 1.3% of GDP in low-income countries to 2.5% in high-income settings (37). However, many of these measures were introduced temporarily to address the immediate shocks caused by the pandemic, as illustrated by the net increase in policies of about 180 measures per week in March 2020, which declined to about only 16 measures per week in January 2022 (37). While institutionalized cooperation across the health, finance, labour and social development sectors is crucial for health and social equity and to promote emergency

preparedness and resilience, social protection efforts undertaken in response to a crisis require a different focus: they should be fit for purpose to (i) reach those most in need, including vulnerable and marginalized populations otherwise excluded from regular national social protection schemes; (ii) provide adequate support; and (iii) be delivered in a timely manner (38).

The Sustainable Development Goals and, in particular, Target 1.3, promote universal coverage of social protection and national social protection floors. These are further supported by the Global Partnership for Universal Social Protection to Achieve the Sustainable Development Goals by 2030, a joint initiative of the ILO and the World Bank; the Global Accelerator on Jobs and Social Protection for Just Transitions; as well as the UN Collaboration on Social Protection, which is an informal network of UN agencies with a common interest in promoting universal coverage of social protection and advocating to extend national social protection floors. Social protection floors aim to include at least four social security guarantees: essential health care; basic income security for children; basic income security for persons of active age who are unable to earn sufficient income, in particular in cases of sickness, unemployment, maternity and disability; and basic income for older persons. (39, 40).

To date, little is known at the global level about the nature and effectiveness of the social protection responses aimed at reducing the socioeconomic burden of the COVID-19 pandemic and PHSM through existing, scaled up or new policies and programmes, in particular when the impacts are viewed through the lens of the social determinants of health. This scoping review provides a snapshot of the evidence about the implementation of social protection measures during the pandemic and highlights the need for greater sensitivity among development actors and health leaders to ensure that emergency responses are equitable and balanced when implementing PHSM to avoid additional strains on affected communities and entire nations, depending on the scale of their implementation.

1.3.1 Objectives

This scoping review aims (i) to increase awareness of the interlinkages between health emergency response activities and their socioeconomic consequences using the lens of the social determinants of health, (ii) familiarize health professionals with concepts and terminology used in the social protection sphere, and (iii) provide an overview of social protection measures implemented during the COVID-19 pandemic to support communities in overcoming economic hardship. The examples can serve as stimuli for actions during future health emergencies and as starting point for multisectoral discussions about resilience-promoting social policies in global development and equitable responses to future health crises.

1.3.2 Target audience

This report is directed at decision- and policy-makers responsible for developing health and social policies and programmes at national and subnational levels, workforce and community leaders involved in implementing PHSM and social services during health emergencies, funders of aid and development programmes, and scholars interested in understanding how social protection policies and programmes can mitigate the unintended consequences of PHSM throughout the health emergency management cycle.

2. Methods

The scoping review followed the Arksey and O'Malley methodology (41), which encompasses six steps: (i) identifying the research question; (ii) identifying relevant studies; (iii) selecting the studies; (iv) charting the data; (v) collating, summarizing, and reporting the results; and (vi) performing a consultation exercise, which is optional and for this review, will be conducted following its publication to identify policy options in consultation with multisectoral policy and practice stakeholders. Details of the approach used to conduct this review are described in [Annex 1](#).

The guiding question informing this evidence summary was: what is the landscape of the evidence on social protection policies implemented during the COVID-19 pandemic that attempted to mitigate the unintended negative consequences of PHSM and their impact on the social determinants of health? Answering this question includes gathering information about (i) the type of social protection measure, (ii) its geographical location, (iii) the target groups, (iv) the targeted contingency or vulnerability, and (v) the reported effects in a subset of 44 studies providing sufficient comparative data for such an analysis.

Studies captured by the WHO COVID-19 Research Database and published between March 2020 and August 2022 were included. The search string is provided in [Annex 2](#).

Studies were included if they:

- reported on new, expanded or existing social protection measures aimed at reducing the unintended negative consequences of PHSM and their impact on the social determinants of health during the COVID-19 pandemic;
- descriptively reported on formal social protection policies and programmes implemented by national and subnational governments;
- evaluated the implementation of social protection policies and programmes.

Because this scoping review is also interested in the quantitative evaluation of social protection policies and programmes aimed at reducing the unintended negative consequences of PHSM implementation, studies comparing two groups (i.e. one receiving a social protection benefit and one not) were included in the effectiveness analysis. This was the case for a subset of 44 of the 316 included articles. However, the term effectiveness needs to be used with caution as not all study designs are suited to allow for true cause-effect conclusions. Instead, some might provide information about associations between an intervention and outcomes. To facilitate the

interpretation of the robustness and meaningfulness of findings, the evidence is presented using a pragmatic interpretation approach based on study design:

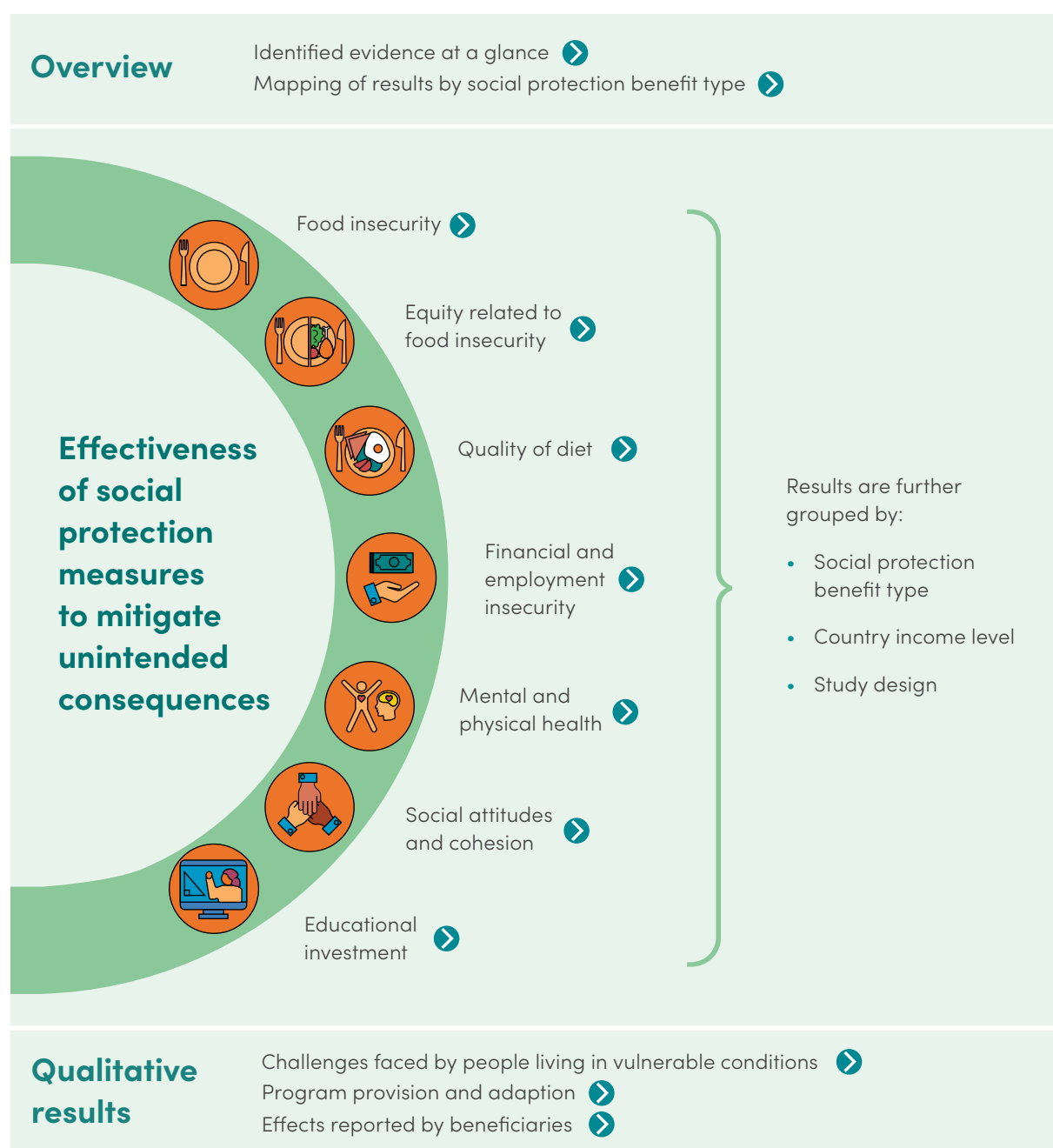
- natural experiments or quasi-experimental studies – that is, studies that exploit natural sources of variation in an intervention to investigate the effect of the policy on the outcome (42, 43); these methods are the most suited to evaluating social policies because they can take into consideration the complexity and context of social interventions;
- experimental studies – that is, studies in which an intervention (i.e. the social protection policy or programme) was randomized to create an intervention and a control group, usually in a controlled setting; while this design produces stronger evidence about the efficacy of interventions, it is restricted in its applicability to a smaller set of circumstances, contexts and social protection interventions. Most social systems, including health systems, advance historically along with human rights norms and criteria to encompass large proportions of the population. Randomly assigning individuals to receive a benefit or be excluded from it thus brings up ethical and human rights challenges and poses the risk of drawing biased conclusions about effectiveness because the study does not consider the complexity and influence of the real-life context;
- longitudinal studies – that is, studies based on data collected at several points in time from the same participants and usually including pre- and post-intervention periods; these designs can usually adjust for context by tracking particular variables over time;
- cross-sectional studies – that is, studies based on data collected at one point in time, usually comparing one group receiving the intervention with a group that does not receive it.

The first two types of studies attempt to control for potential confounders in their design, whereas the latter two types control for confounders by using statistical adjustment. Hence, (quasi-)experimental studies are considered more robust for causal inference than longitudinal or cross-sectional studies. Additional important aspects of causality and risk of bias assessments – such as sample selection and data collection mechanisms, measurement errors or loss to follow up – are not reflected in this categorization.

3. Results

How to navigate this chapter:

- Use arrow buttons to jump directly to the different sections
- 🌀 Throughout this chapter, keep an eye out for **orange icons**, indicating the reviewed categories of unintended health and socio-economic consequences



The evidence is reported according to different entry points. The overview of included evidence (Section 3.1) provides an inventory of the social protection measures reviewed. This is followed by a mapping of social protection policies according to benefit type (Section 3.2). Section 3.3 reports on a subset of studies analysing the effectiveness of various social protection measures in mitigating the unintended negative consequences of PHSM implementation for those interested in addressing specific vulnerabilities or contingencies, such as food insecurity or financial and employment insecurity. Those results are grouped by country income level and study design to allow readers to further filter results, for example to identify the most robust evidence or examples from countries with similar economic backgrounds. Section 3.4 provides insights derived from qualitative data into the lived experience of people who received emergency social protection support.

3.1 Overview of included evidence

In total, 316 studies build the evidence base for this report. Of these, 211 looked at the implementation of social protection policies and programmes during the COVID-19 pandemic in a single country, 61 in multiple countries and 44 were reports from international organizations with a regional or global focus. A total of 271 studies were peer-reviewed articles, and 45 were grey literature reports.

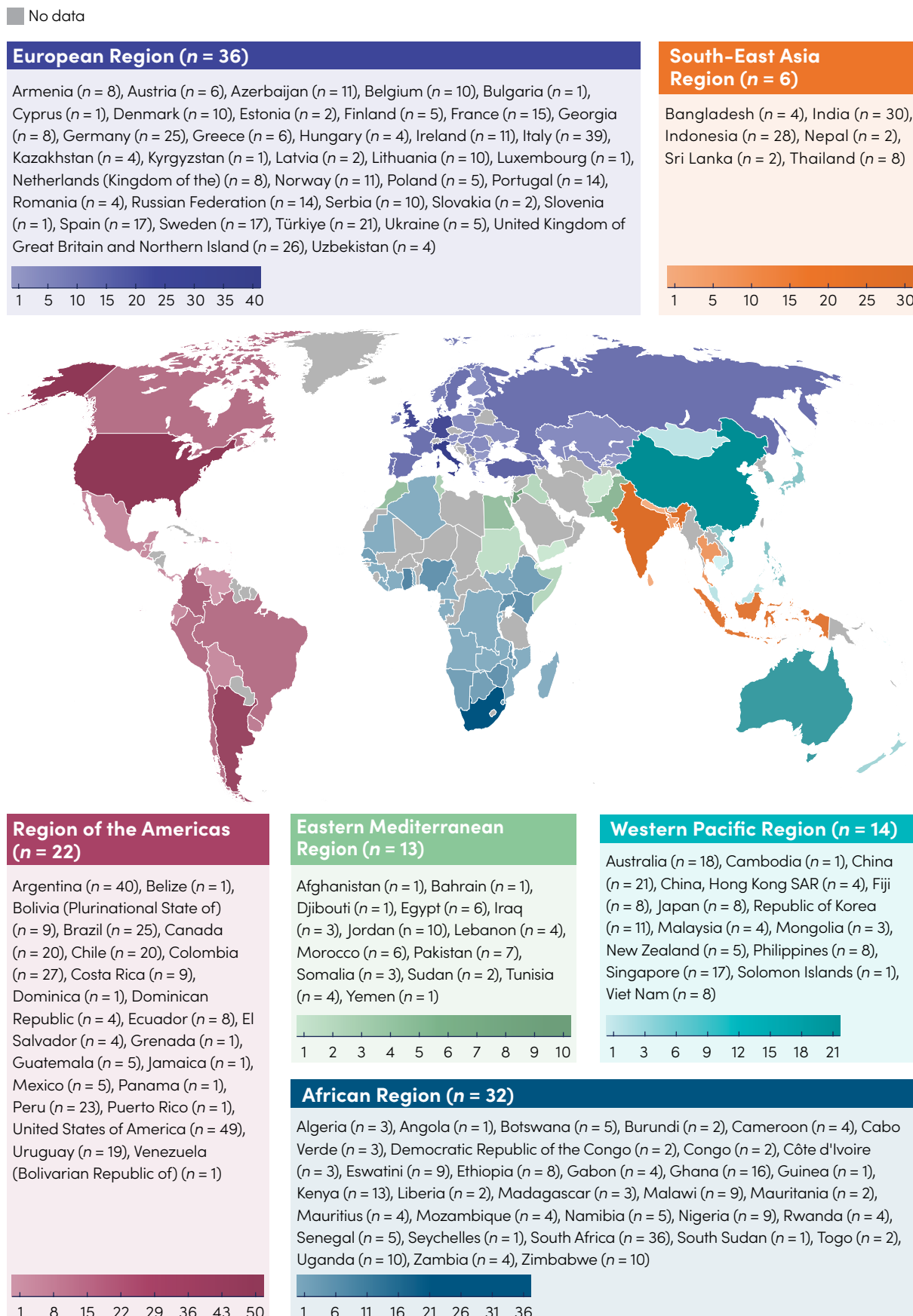
The review captured 1 079 different types of social protection policies and programmes implemented in response to the COVID-19 pandemic.⁴ Based on the World Bank's country income categorization (44), 55 of the identified social protection policies were implemented in low-income countries, 204 in lower-middle-income countries, 361 in upper-middle-income countries, and 428 in high-income countries, and 31 policies were reported in multicountry studies with countries classified into different income categories.

When considering the country context, income level categories are important as they are broadly associated with fiscal space for the development of social protection and welfare systems, in particular at the lower levels of country income. However, the income level of a country does not directly translate into the level of a welfare state (see Section 4 for further discussion).

In terms of the geographical distribution of results by WHO region, this review includes social protection policies and programmes from 123 countries, areas or territories. Altogether, 32 of these were from the WHO African Region, 22 from the Region of the Americas, 13 from the Eastern Mediterranean Region, 36 from the European Region, 6 from the South-East Asia Region and 14 from the Western Pacific Region (Fig. 3).

4 This is about one third of the social protection cases captured in inventories such as that of Gentilini et al., who as of January 2022, had counted a total of 3 856 social protection and labour measures planned or implemented (37).

Fig. 3. Geographical overview of countries, territories and areas in which social protection policies and programmes were implemented in response to the COVID-19 pandemic, as identified by this review



3.2 Mapping of social protection policies and programmes by benefit type

3.2.1 Overview of identified social protection benefits

The review identified 1 079 distinct social protection policies and programmes from 316 studies and reports. Social protection measures can be categorized by the type of benefit⁵ they provide to recipients.

Table 1 maps the 1 079 included social protection policies and programmes according to the type of benefit (e.g. in cash or in kind), the contingency they address (e.g. unemployment, sickness, disability) and the country's income level. Overall, 742 social protection benefits were provided in-cash, 230 as an in-kind benefit (and of these, 134 were provided as goods, 73 as services and 23 as vouchers), 63 were utility or financial fee waivers, 24 were general labour and fiscal measures, and 20 were moratoria on rent.

Almost half of the social protection measures were newly introduced in response to the COVID-19 pandemic ($n = 523$), mostly as in-cash benefits for families ($n = 309$). Most of these 523 social protection measures were introduced in high-income countries ($n = 214$). Likewise, the adaptation of existing policies ($n = 272$) to meet increased needs during the emergency focused mainly on the introduction of in-cash benefits for families ($n = 131$). These existing policies were mainly in place in high-income ($n = 133$) and upper-middle-income countries ($n = 88$).

5 In the context of an effectiveness evaluation, a social protection benefit equals the intervention.

Table 1. Type of social protection benefits, by contingency and country income level, all studies

Benefit	Example	Country income level				No. of multicountry studies	Total
		Low	Lower-middle	Upper-middle	High		
In cash: Programme providing cash benefits to individuals or households							742
Family maintenance	Child allowance	26	96	178	110	15	425
Unemployment	Income support	3	17	40	114	2	176
Sickness	Paid sick leave	2	7	7	55	3	74
Old age	Pension	NA	7	17	3	2	29
Disability	Invalidity pension	NA	1	10	6	NA	17
Other	Deferrals on mortgage payments	NA	1	1	7	NA	9
Maternity/paternity/parental	Paid parental leave	NA	NA	3	4	NA	7
Education	Tuition fee assistance	NA	NA	3	NA	NA	3
Housing	Rent allowance	NA	NA	NA	2	NA	2
In kind: Programme providing goods, services or vouchers to allow individuals or households to obtain defined goods or services							230
Goods	Food	16	39	48	30	1	134
Services	Skills training as part of an employment programme	1	11	19	37	5	73
Vouchers	Voucher for groceries	0	2	10	10	1	23
General labour and fiscal measures: Measures and policies directed at stimulating and regulating the labour market or using taxation and government spending							24
Taxation	VAT decrease	1	4	8	11		24
Moratorium on evictions or other rent relief: Programmes to protect tenants from being evicted due to unpaid rent or measures to reduce or defer payment of rent							20
Moratorium	Rent deferral	0	2	2	15	1	20
Utility or financial fee waiver: Programme providing a fee waiver allowing individuals or households to access a defined good or service or reimbursing a defined good or service							63
Waiver	For household electricity costs	6	18	15	23	1	63
Total		55	205	361	427	31	1079

NA: not applicable; VAT: value-added tax.

3.3 “Effectiveness” of social protection policies and programmes in mitigating health and socioeconomic consequences of PHSM

Of the 316 studies documenting social protection measures, 44 quantitative or mixed methods studies provided an estimate of the relationship between social protection and unintended consequences of PHSM by comparing two groups (Annex 3). Section 2, the methods section of this report, provides more details about how study designs used to evaluate associations and effectiveness can help to assess the robustness of the evidence.

In this report, results are grouped by the unintended negative consequences arising from PHSM implementation during the COVID-19 pandemic that was addressed by social protection: food insecurity ($n = 32$), financial and employment insecurity ($n = 18$), mental and physical health ($n = 15$), quality of diet ($n = 2$), social attitudes and cohesion ($n = 2$), and educational investment ($n = 1$). Some studies examined more than one unintended negative consequence.

The evidence is further categorized by the type of social protection benefit (Table 1). For those interested in identifying examples relevant to their country income level, results are reported by income group, with the most robust study designs presented first. Several studies assessed the effects of different social protection benefits on multiple outcomes and, hence, these are reported individually under the respective section. Often, social protection programmes consisted of multiple components, for example simultaneous provision of in-cash and in-kind benefits. These findings are reported separately.



3.3.1 Social protection and food insecurity (32 studies)

Food insecurity was addressed in 32 studies and operationalized as the lack of “regular access to enough safe and nutritious food for normal growth and development and an active and healthy life” (45).⁶ Food insufficiency is considered a severe form of food insecurity. Generally, food insecurity can be caused by the “unavailability of food and/or lack of resources to obtain food” (45). The number of studies in parentheses indicates the total count of studies. Variations in the total number of studies attributed to each subheading occur because most studies reported multiple outcomes.

Key findings: Social protection policies and programmes appeared to be effective in reducing food insecurity. This finding was consistent for (quasi-)experimental evaluations and across benefit types and country income levels. The positive effects of social assistance (i.e. both in-cash and in-kind benefits) and unemployment insurance were most pronounced. Mixed results from cross-sectional studies indicated that the volume of benefits provided was often not sufficient to offset high needs during the emergency situation among a population that was already vulnerable and food insecure prior to the COVID-19 pandemic.

Types of benefits: Social assistance was provided through in-cash transfers ($n = 22$ studies), in-kind benefits ($n = 14$), social insurance ($n = 7$), or other measures, such as moratoria on evictions, tax credits, and general labour and fiscal measures ($n = 6$).⁷

Country income groups: Social assistance was provided in high-income ($n = 18$ studies), middle-income ($n = 11$) and low-income countries ($n = 3$).

6 Studies focusing on quality of diet are reported separately in Section 3.3.3.

7 Some studies investigated more than one type of policy; therefore, the sum of all types of policies exceeds the total number of studies included in this paragraph (32 studies).

Study design: Three studies used an experimental design, 10 were quasi-experimental studies, 2 were longitudinal analyses and 17 were cross-sectional.

3.3.1.1 Social assistance – in-cash benefits (22 studies)

Most experimental and (quasi-)experimental evidence (6/8 studies) showed that in-cash benefits lead to decreased food insecurity. This result held true irrespective of a country's income level or how food insecurity was assessed. In contrast, no associations or mixed findings were recorded by 11/14 longitudinal or cross-sectional studies. These findings most likely reflect that these studies did not adjust appropriately for benefit recipients being food-insecure prior to the pandemic. Findings pointed to the conclusion that the amounts of the benefits were not sufficient to offset the additional burden posed by the emergency situation.

3.3.1.1.1 High-income countries (8 studies)

All studies from high-income contexts are from the United States of America ($n = 8$ studies), and most ($n = 7$) evaluated the Supplemental Nutrition Assistance Program (SNAP), a longstanding, purpose-specific cash transfer programme for low-income families that was expanded and adapted during the first months of the COVID-19 pandemic (46-53).

Natural experiments and (quasi-)experimental studies ($n = 2$): One study conducted a natural experiment to estimate the effects of increased SNAP benefits. The authors found a significant reduction in food insecurity and visits to local food pantries after SNAP benefits were increased (46). A study evaluating a one-time unconditional cash transfer for low-income households unrelated to a government programme found no effects on food insecurity (53).

Longitudinal studies ($n = 1$): One longitudinal study reported that individuals who started receiving SNAP benefits during the pandemic reported no change in food insecurity compared with before the COVID-19 pandemic (49).

Cross-sectional studies ($n = 5$): Five studies found a higher or comparable level of food insecurity among SNAP recipients compared with non-recipients, corresponding to the overall theory of change assumption of the social determinants of health, which is that SNAP recipients are, in general, more food insecure than the rest of the population and, thus, likely suffered more from the pandemic's socioeconomic impacts (47, 48, 51, 52). One study investigating a large cross-sectional sample of the United States population and controlling for a comprehensive set of confounders provided evidence that participation in SNAP was associated with lower levels of food insecurity (50).

3.3.1.1.2 Middle-income countries (11 studies)

The results from studies of cash transfers in middle-income countries come from Argentina (54), Brazil (55), Peru (56), Colombia (57), India (58-60), Pakistan (61), Nigeria (62), South Africa (63) and Kenya (64).

Natural experiments and (quasi-)experimental studies ($n = 4$): An experimental study in Kenya found that recipients of the National Safety Net Programme or the Hunger Safety Net Programme were less likely to experience food insecurity than non-recipients. In addition, being a recipient of the National Programme or the Hunger Safety Net Programme was associated with a lower probability of income poverty and lived poverty, the definition of which included shortages of food, clean water and cooking fuel (64). In Colombia, individuals receiving cash transfers were more likely to report buying food during the previous week; however, cash transfers did not impact other indicators of food insecurity, such as reporting having zero meals per day, eating at a friend's or relative's, or begging for food on the street (57). Two natural experiments evaluated the Indian Pradhan

Mantri Garib Kalyan Yojana (PM-GKY) package (Box 2), a new and multifaceted social assistance programme introduced during the pandemic to address the needs of vulnerable populations. Both found that the Package reduced food insecurity among beneficiaries (59, 60).



Box 2. In focus: India's national relief package – Pradhan Mantri Garib Kalyan Yojana

In March 2020, the national government of India launched the Pradhan Mantri Garib Kalyan Yojana (PM-GKY) project, a comprehensive relief package providing 1.7 trillion Indian rupees (₹) to support low-income individuals and families through cash and in-kind benefits to ensure they could meet essential needs during the pandemic. In total, the financial assistance provided through PM-GKY improved financial security: ₹ 68.82 billion reached more than 420 million people. The PM-GKY included several key elements spanning different types of social protection benefits:

- health insurance coverage – ₹ 5 million per health worker fighting COVID-19 under the Insurance Scheme, extended for 1 year until April 2021;
- in-kind food distribution – 800 million people living in poverty received 5 kg of wheat or rice and 1 kg of pulses free of charge every month, extended to November 2021;
- unconditional cash transfers – for farmers a one-off front-loaded payment of ₹ 2 000 was made in the first week of April 2020, benefiting 87 million farmers. Cash transfers were also made to construction workers by State Governments from the Building and Construction Workers Welfare Fund. One-off cash payments of ₹ 1 000 were also made to vulnerable groups, benefitting 30 million poor older persons, widows and persons with disabilities;
- conditional cash transfers – low-income families, including 200 million female Jan Dhan account holders, received ₹ 500 per month for 3 months to buy tanks of cooking gas;
- general labour and fiscal measures – minimum wages were raised for rural workers under the Mahatma Gandhi National Rural Employment Guarantee Act.

Evidence of PM-GKY reducing unintended negative consequences for households during the COVID-19 pandemic

- Food insecurity and related inequity: Evidence from longitudinal studies in India showed that participation in PM-GKY decreased the prevalence of severe and moderate food insecurity, with larger reductions seen in rural households of about 2.4 % and 0.92%, respectively.
- Financial insecurity: Further studies suggested that individuals who received the benefits were more likely to procure inputs for their agricultural practices and were less likely to use borrowed money. However, the programme did not affect how participants used savings or help from friends to cover their expenditures.

Cross-sectional studies (n = 7): Four studies (55, 56, 58, 62) found a higher or comparable level of food insecurity in the group receiving benefits compared with the control group; this most likely reflected a failure to adjust for the baseline position of food insecurity in the targeted populations, which are from the beginning more vulnerable, compared with the comparator group. Three studies found lower food insecurity among programme beneficiaries (54, 61, 63).

3.3.1.1.3 Low-income countries (3 studies)

Results of the impact of cash transfers and food insecurity in low-income countries came from three countries – Ethiopia, Malawi and Uganda (65–67).

Natural experiments and (quasi-)experimental studies (n = 2): A study from Uganda (66) found that households receiving cash transfers were less food insecure than households that did not receive them. A study from Ethiopia (65) showed that participating in the Productive Safety Net Programme (PSNP) – targeted at households that depended on the income of older people and at people living with disabilities – that involved in-cash benefits and in-kind food transfers, a public employment programme and the provision of information about nutrition, offset almost completely the increase in food insecurity due to the pandemic and related PHSM (Box 3).

Cross-sectional studies (n = 1): In Malawi, one study showed that households receiving support, either from existing schemes or from the emergency COVID-19 Urban Cash Intervention programme, were less likely to reduce their food consumption than those who did not receive such benefits (67).

3.3.1.2 Social assistance – in-kind benefits (goods and services) (14 studies)

Evidence from (quasi-)experimental studies (n = 3) showed that in-kind transfers, either as stand-alone policies or as part of a package, decreased food insecurity, especially in middle- and low-income countries. Results from longitudinal and cross-sectional studies (n = 11) are mixed, and their findings should be interpreted with caution. Many of these studies raise concerns about residual confounding, which may point to the increased need to expand or introduce social security benefits during a health emergency to compensate for its disproportionate socioeconomic burden on vulnerable population groups.

3.3.1.2.1 High-income countries (6 studies)

Five of the six studies investigating the association between in-kind benefits and food insecurity focused on the United States (47, 49, 52, 68, 69) and one focused on the United Kingdom (70).

Natural experiments and (quasi-)experimental studies (n = 1): A natural experiment evaluating the Meals-To-You programme found that households receiving more boxes of healthy meals and ingredients showed lower food insecurity than those not enrolled in the programme (69).

Longitudinal studies (n = 1): A sample of households was investigated between January 2018 and August 2020, and the study found that home-delivered meals, community meals and other services implemented under the Older Americans Act (1965) in the United States were associated with a significant decrease in food insecurity (49).

Cross-sectional studies (n = 4): Four cross-sectional studies investigated indicators related to food insecurity in association with the Special Supplemental Nutrition Assistance Program for Women, Infants and Children (known as WIC) in the United States, which existed prior to the pandemic and includes food transfers, referrals to health care facilities and information about healthy eating for women, infants and children in vulnerable situations, together with other programmes for in-kind transfers (e.g. school meals programmes, farmers-to-families food boxes) (47, 52, 68). All studies reported that food insecurity was higher or comparable in those individuals who received the Programme's benefits or participated in any other in-kind transfer initiative compared with individuals who did not receive the benefits. These data reflect the programme's logic of targeting those at greater risk of food insecurity. The findings indicated that the implementation approach or adequacy of the intervention may have been insufficient to reduce food insecurity. The comparator groups for these studies were people who were the general population and who

were less food insecure, and, thus, the results are likely to reflect the higher need for assistance among disadvantaged groups that were more significantly impacted by the burdens of the pandemic and PHSM.

One study from the United Kingdom investigated a free school meals programme involving vouchers and in-kind transfers; it found that beneficiaries were more likely to use a food bank, indicating higher continuing needs for measures among the beneficiary population despite the intervention (70).

3.3.1.2.2 Middle-income countries (6 studies)

Studies from Argentina (54), Brazil (55), Peru (56), India (58, 60) and Nigeria (62) evaluated in-kind benefits and food insecurity.

Natural experiments and (quasi-)experimental studies (n = 1): A natural experiment in India investigated the effect of the newly introduced PM-GKY benefits package and found a decrease in moderate and severe food insecurity (60).

Cross-sectional studies (n = 5): One study found no association between receiving PM-GKY benefits and the number of meals consumed during so-called lockdown in India (58). However, there are concerns about unmeasured confounding that may prevent causal interpretation. The same concerns hold for three studies from South America (54–56) and one from Nigeria (62), with results indicating that food insecurity was higher or comparable among individuals who received the in-kind benefits compared with groups not receiving these benefits.

3.3.1.2.3 Low-income countries (2 studies)

Studies were conducted in Ethiopia (65) and Malawi (67).

Natural experiments and (quasi-)experimental studies (n = 1): The effect of participating in the multicomponent PSNP in Ethiopia was investigated (Box 3). The study found that households participating in this programme were able to offset almost completely the parallel increase in food insecurity attributed to the pandemic, irrespective of which benefit they received (65).

Cross-sectional studies (n = 1): One study investigated the role of existing and new social assistance programmes in Malawi, including in-kind transfers (e.g. free food and other transfers) and in-cash transfers (Section 3.3.1.1.3). Households receiving any kind of social assistance were less likely to reduce food consumption than non-recipients (67).



Box 3. In focus: Ethiopia's Productive Safety Net Programme

Ethiopia's Productive Safety Net Programme (PSNP) is the country's flagship rural food security programme, operational since 2005. PSNP's goal is to see "extreme poverty reduced in rural Ethiopia", and it has grown to cover 40% of the country's districts (known as *woredas*) (1). It is targeted geographically, by community, and also individually (i.e. it is means-based) to areas where households have historically had critical food insecurity or low holdings of assets (e.g. land, oxen) and limited alternative sources of income. While the majority of recipients benefit from a public works programme, approximately 15% receive in-cash or in-kind payments (2). PSNP benefits include:

- general labour and fiscal measures – public works, mainly employing its beneficiaries in rural areas in labour-intensive public works activities for 6 months per year;
- in-kind food assistance;
- conditional cash transfers – soft conditionality, implemented through labelling and messaging, such as information sessions on health services and behavioural change, for beneficiaries receiving Temporary Direct Support.

During the pandemic, individuals were exempted from their work duties in the employment programme but still received their income, which thus operated as an unconditional cash transfer for this period while maintaining the promise of employment when PHSM, such as physical distancing and mobility restrictions, were lifted.

Evidence of PSNP reducing unintended negative consequences for households during the COVID-19 pandemic

- Food insecurity and related inequity: Ethiopia's PSNP mitigated the impacts of the pandemic and PHSM on food security. The protective role of the PSNP was slightly higher for poorer households and those living in remote areas.
- Financial insecurity: Households participating in the PSNP were less likely to resort to financial coping mechanisms related to reducing expenditures on important inputs for their agricultural activities in rural areas.

References

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3.3.1.3 Social insurance (7 studies)

Four out of seven studies showed a positive relationship between social insurance and food security. Five studies – all from the United States – focused on unemployment insurance benefits. Four of them found beneficial effects from the intervention. Among those were three quasi-experimental studies, all of which showed that receiving unemployment insurance decreased food insecurity. Two cross-sectional studies from middle-income countries assessed old age pension benefits, one with mixed and one with null results.

3.3.1.3.1 High-income countries (5 studies)

All five studies from a high-income context were conducted in the United States and focused on unemployment benefits. Two of them focused on pre-existing unemployment insurance benefits (48, 50), whereas three included an evaluation of additional benefits provided in response to the pandemic (71–73).

Natural experiments and (quasi-)experimental studies (n = 2): Receiving increased unemployment insurance benefits was associated with decreased food insecurity (72). This effect was stronger for those who received higher unemployment benefits. A similar picture emerged from another study: food insecurity rose again after expiration of the additional unemployment benefits (71).

Cross-sectional studies (n = 3): One study showed that individuals who received the increased unemployment benefits had a lower risk of food insecurity, in line with results from quasi-experimental studies (73). Furthermore, another study found that individuals who received unemployment benefits were less food insecure than those who did not receive the benefits (50). A third study reported that in cases of financial hardship, unemployment benefits were not enough to offset reported food insecurity (48). Owing to the nature of the methods used, concerns about residual confounding are raised for all three studies, so these results should be interpreted with caution.

3.3.1.3.2 Middle-income countries (2 studies)

These studies come from Argentina (54) and South Africa (63).

Cross-sectional studies (n = 2): One cross-sectional study of the Argentinian population found no association between receiving a pension – among older people, those living with disabilities and mothers of at least seven children – and food insecurity (54). A cross-sectional study of the South African population showed that receiving old-age pension benefits was not related to food insecurity among children, but there was a general lower likelihood of the household reporting hunger (63).

3.3.1.4 Other measures (6 studies)

Five out of six studies evaluating measures such as tax credits (n = 2), small business loans (n = 1), minimum wage (n = 1) and multistimulus packages (n = 1) showed positive effects from social protection on food security. The study on eviction moratoria found mixed effects.

3.3.1.4.1 High-income countries (4 studies)

All of the evidence from high-income countries comes from the United States. The investigated policies included a new moratorium on evictions (74), existing and new tax credits (75, 76), and existing state minimum wage and paid sick leave policies (77).

Natural experiments and (quasi-)experimental studies (n = 2): A study reported in 2022 that a new moratorium on evictions implemented at the state level did not impact self-reported food insecurity when compared with states where no county-level eviction moratoria were in place, but the new moratorium was associated with a reduction of Google searches for “food stamps” and “food banks near me” (74). Furthermore, another study reported that state eligibility for tax credits was associated with a reduction in food insufficiency among eligible households between March and October 2021 (75).

Longitudinal studies (n = 1): An analysis in 2022 reported that receiving a new, one-time, refundable tax credit was associated with a significant reduction in food insufficiency among eligible households (76).

Cross-sectional studies (n = 1): A cross-sectional analysis from the United States reported in 2021 that only the highest level of state minimum wage was associated with a lower proportion of households reporting food insecurity and very low child food insecurity (77). Furthermore, the study indicated that individuals missing work due to COVID-19 who did not have paid sick leave, were also more likely to report food insecurity (77).

3.3.1.4.2 Middle-income countries (1 study)

Cross-sectional study (n = 1): A cross-sectional analysis in Nigeria from 2022 investigated the role of a new COVID-19 fiscal stimulus that involved loans to owners of small-scale businesses together with cash transfers and in-kind transfers (i.e. food). The study found that receiving any kind of assistance was related to lower food insecurity, but this difference was not statistically significant (62).

3.3.1.4.3 Low-income countries (1 study)

Natural experiments and (quasi-)experimental studies (n = 1): Together with unconditional cash transfers for vulnerable households (Section 3.3.1.1.3), the PSNP in Ethiopia also included beneficiaries who were employed in a public works programme for 6 months per year and were paid in cash. During the pandemic, individuals were exempted from their work duties, but still received compensation. Furthermore, the Programme included the provision of information about maternal and child nutrition practices. The authors found that participation in the PSNP offset almost completely the parallel increase in food insecurity caused by the pandemic, and the protective role of the PSNP was greater for poorer households and those living in remote areas (65).



3.3.2 Social protection and equity related to food insecurity (3 studies)

Key findings: The evidence about the equity impacts of social protection benefits is very limited and exclusively from the USA. Findings point to the differential effectiveness of social protection measures for varied racial, ethnic and socioeconomic groups.

Natural experiments and (quasi-)experimental studies (n = 1): A quasi-experimental study reported in 2022 found that while eviction moratoria did not significantly affect food insecurity in the nonstratified sample, additional weeks of eviction moratoria led to a significant decrease in food insecurity and a decrease in financial anxiety among African American households (74).

Cross-sectional studies (n = 2): One study observed significantly higher food insecurity among nonwhite households and those receiving SNAP benefits, unemployment insurance and community-led food support. Among SNAP recipients, white, Black and Asian households seemed to benefit more from the programme than Hispanics and other races. Additionally, Hispanic households were found to be underenrolled in SNAP, probably due to logistical obstacles or concerns linked to immigration laws. Further, a compounding effect was identified, additionally increasing food security among those SNAP participants who also received unemployment insurance and charitable food supplies during the COVID-19 pandemic (50).

Another cross-sectional analysis observed that a minimum wage of at least US\$ 12.00 per hour was associated with a decline in food insecurity for children. This finding was more pronounced among non-Hispanic Black and non-Hispanic white populations. In terms of ethnicity, a state minimum wage US\$ 12.00 per hour was associated with a reduction in household food insecurity in comparison with states that had a minimum wage of US\$ 8.00 per hour. For those who missed work due to COVID-19, being excluded from paid sick leave was associated with an increase in household food insecurity compared with those who had access to paid sick leave. This particularly affected vulnerable groups, including households with children, and non-Hispanic Black, Hispanic and non-Hispanic white households. Due to the cross-sectional nature of the study, the differences remained unexplained (77).



3.3.3 Social protection and quality of diet (2 studies)

Quality of diet was operationalized as self-reported fruit and vegetable intake for the general population (52) and diet diversity for mothers or children, or both (65).

Key findings: The evidence base about social protection and the quality of diet is scarce. Two studies, both assessing multicomponent social assistance programmes comprising in-cash and in-kind benefits, did not identify an association between quality of diet and programme enrolment. However, both studies emphasized challenges pertaining to the design of the programme and questioned the adequacy of the benefit amount and the products included in the in-kind benefit packages, as well as logistical service delivery issues.

Types of benefits: Social assistance combining in-kind and in-cash benefits ($n = 2$).

Country income groups: One study each from a high- and low-income country – that is the USA (52) and Ethiopia (65), respectively.

Study design: One natural experiment (65) and one cross-sectional study (52).

3.3.3.1 Social assistance – in-cash and in-kind benefits (2 studies)

3.3.3.1.1 High-income countries (1 study)

Cross-sectional study ($n = 1$): The one cross-sectional study from the United States did not identify an association between the quality of diet and receiving in-cash and in-kind benefits from SNAP (52).

3.3.3.1.2 Low-income countries (1 study)

Natural experiments and (quasi-)experimental studies ($n = 1$): A natural experiment in Ethiopia evaluated the PSNP, a social protection mechanism from the government involving cash transfers, in-kind transfers (i.e. food) and employment programmes for low-income households, and it did not find an effect of Programme participation on the quality of mothers' and children's diets. The authors explain this as possibly resulting from limited access to food markets during the COVID-19 pandemic, which may have hindered participants from spending the cash benefit on more diverse food options (65).



3.3.4 Social protection and financial and employment insecurity (18 studies)

Financial insecurity was operationalized as perceived or objective financial strain, risk of eviction, inability to afford clean water or cooking fuel, missed rent or mortgage payments, and reductions in expenditures on agricultural inputs. The concept also included the coping strategies used to compensate for financial hardship, such as spending savings to subsidize regular expenses, taking out loans or going into debt for basic necessities, selling assets, using food banks or reducing regular spending. Measures of poverty, and loss of income or wealth were also considered (e.g. monthly earnings, household asset wealth index). Measures of employment insecurity included, for example, changed employment status, the number of hours worked and job-seeking behaviour.

Key findings: Evidence suggests that the effectiveness of social assistance schemes varied across country income groups: while cash transfers and in-kind benefits provided short-term financial or other relief to households in middle- and low-income countries, hardly any effects were found in high-income countries. Results from cross-sectional studies supported the assumption that recipients of social assistance suffer from higher financial and employment insecurity than the rest of the population. It is important to note that one-time payments are not considered good practice, based on evidence from the social protection and economic literature. While they result in temporary improvements, the lack of continuation may result in the positive effects not being

sustainable over time; the payment might also be insufficient to make a noticeable difference if the financial burden is too large to be offset by a small, one-time contribution. Additionally, cash transfers need to be assessed in relation to the context-specific cost of living to determine their adequacy to reduce negative socioeconomic consequences.

Evidence from the USA about receiving unemployment or increased unemployment benefits as part of social insurance showed there was a decrease in financial strain in the form of improved housing security (e.g. the ability to pay rent, a decreased likelihood of eviction). Public employment programmes appeared to be beneficial for financial and employment security in low- and middle-income countries. Other measures, such as tax credits or eviction moratoria, yielded mixed or null results, including an occasional worsening of financial and employment insecurity.

Types of benefits: Studies assessed in-cash benefits ($n = 12$); in-kind benefits ($n = 4$); social insurance ($n = 3$); and other measures, including public employment programmes, moratoria on evictions, tax credits and subsidies for utilities ($n = 6$).⁸

Country income groups: Studies assessed high-income ($n = 9$), middle-income ($n = 7$) and low-income countries ($n = 2$).

Study design: The designs used were experimental ($n = 3$), quasi-experimental ($n = 5$), longitudinal ($n = 1$) and cross-sectional ($n = 9$).

3.3.4.1 Social assistance – in-cash benefits (12 studies)

Overall, the evidence was mixed. In high-income countries, three out of four studies, of which two were quasi-experimental, showed no effect of one-time or complex cash transfers on reducing financial or employment insecurity.

In middle- and low-income countries, five of the eight studies found mixed effects, with cash transfers providing immediate relief to households, for example by enabling them to avoid selling their assets and by reducing the likelihood of needing to cut expenditures on important inputs for their agricultural activities. Yet other indicators of financial insecurity were not improved, such as reported worry about finances or borrowing money from friends and family. Four of the programmes were delivered in combination with in-kind support.

Cross-sectional studies reported across country income levels that individuals who received cash transfers were more likely to experience financial and employment insecurity than nonrecipients.

3.3.4.1.1 High-income countries (4 studies)

Studies were from the United States (53), Canada (78), Chile (79) and Australia (80).

Natural experiments and (quasi-)experimental studies ($n = 2$): Two natural experiments (one from Canada and one from the United States) evaluated the effect of one-time unconditional cash transfers.⁹ Both studies reported that receiving the benefit did not affect a household's ability to make ends meet, material hardship, debt, coping strategies, labour market participation or monthly earnings (53, 78). The study from the United States reported that receiving a cash transfer was related to a higher likelihood of searching for a job, but the causal mechanisms were not clear (53).

8 Some studies investigated more than one type of policy; therefore, the sum of all types of policies exceeds the total number of studies included in this section.

9 Unconditional cash transfers are cash given without requiring recipients to meet criteria in order to receive them. In contrast, conditional cash transfers may require that recipients fulfil certain criteria to receive cash, for example by attending a school or clinic.

Cross-sectional studies (n = 2): Two studies evaluated complex cash transfer interventions using cross-sectional designs. A 2022 study in a sample of the Australian population demonstrated that receiving cash transfers through the Coronavirus Supplement was significantly associated with lower financial insecurity (80). A 2021 study analysed a Chilean governmental policy that included both an Emergency Family Income transfer and the possibility of withdrawing extra funds from a mandatory, privately managed pension system (i.e. from the Pension Fund Administration). The authors found that individuals who received both Emergency Family Income and withdrew money from the Pension Fund Administration were less likely to accept a formal job offer. However, these results need to be interpreted with caution due to concerns about residual confounding (79).

3.3.4.1.2 Middle-income countries (6 studies)

Studies conducted in Armenia (81), Brazil (82), Colombia (57), India (58, 83) and Kenya (64) investigated the association between new or adapted, complex governmental cash transfer programmes and measures of socioeconomic wellbeing.

Natural experiments and (quasi-)experimental studies (n = 2): An experimental study investigating an unconditional cash transfer for eligible Colombian households yielded mixed effects on financial insecurity and coping strategies: on the one hand, receiving the cash transfer decreased the probability of having to pawn or sell personal belongings; on the other hand, it did not affect the probability of turning to other coping strategies, such as depleting savings, borrowing money or skipping loan payments (57). Similarly mixed results were obtained in a quasi-experimental study investigating two governmental programmes in Kenya, the National Safety Net and Hunger Safety Net Programmes (64). Being enrolled in either one of the programmes resulted in recipients selling fewer assets, reporting fewer economic shocks and in a lower prevalence of income poverty. However, receiving the transfers did not affect the engagement with other strategies to cope with financial hardship, such as depleting savings, taking out a loan or borrowing money from friends. The cash transfers did not affect the prevalence of lived poverty (i.e. how often individuals were deprived of clean water or cooking fuel) or general household wealth (64).

Cross-sectional studies (n = 4): Two analyses from 2021 assessing the Indian PM-GKY package (Box 2), including both cash transfers and in-kind support, suggested that individuals who received the benefits were more likely to procure inputs for their agricultural practices and were less likely to use borrowed money for this (58, 83). However, the programme did not affect how participants used savings or help from friends to cover their expenditures. A 2021 study from Armenia found that individuals receiving financial aid were not less likely to report subjective or objective financial insecurity (i.e. an inability to cover expenses) (81). It also reported that individuals who received in-cash benefits were more likely to be worried about their financial or job situation. A similar result was suggested by a 2021 study in Brazil (82). Individuals who were eligible to receive the *Auxilio Emergencial* cash transfer were more likely to be unemployed and to report working fewer hours (82). These associations most likely reflect that individuals who were in more precarious financial and employment situations were more likely to apply and qualify for social assistance from the government.

3.3.4.1.3 Low-income countries (2 studies)

Two studies from sub-Saharan Africa investigated the association between cash transfer programmes and measures of financial strain (65, 67).

Natural experiments and (quasi-)experimental studies (n = 1): The PSNP from the Ethiopian government (Box 3) consisted of unconditional cash transfers and in-kind transfers (i.e. food) to households whose main income earners were older and to people living with disabilities, a public employment programme and provision of information about nutrition for poor households (65). The

quasi-experimental study suggested that households participating in the PSNP were less likely to reduce expenditures on important inputs for their agricultural activities.

Cross-sectional studies (n = 1): A Malawian study looking at the COVID-19 Urban Cash intervention reported mixed results (67). Households that received social assistance as a combination of in-cash and in-kind benefits were less likely to rely on savings but were more likely to rely on remittances from family and friends. Furthermore, the study reported no associations between the programme and engaging in other income-generating activities in response to economic shocks experienced during the pandemic.

3.3.4.2 Social assistance – in-kind benefits (4 studies)

The evidence about the role of in-kind support in alleviating financial insecurity ($n = 4$) is mixed, and all programmes studied involved a social assistance package that included in-cash and in-kind benefits. The studies come from middle- and low-income countries. The provision of food to vulnerable families seemed to have helped them to continue financing agricultural inputs and be less reliant on savings to buy food, but it did not affect other coping mechanisms, such as borrowing money from friends and family.

3.3.4.2.1 Middle-income countries (2 studies)

Both studies were conducted in India (58, 83).

Cross-sectional studies (n = 2): Two studies investigated the role of the PM-GKY package (Box 2), which included in-kind benefits (i.e. food) together with cash transfers (58, 83). The studies showed positive associations between receiving the benefits and investments made in agricultural inputs and decreased borrowing behaviour.

3.3.4.2.2 Low-income countries (2 studies)

The evidence comes from Ethiopia and Malawi (65, 67).

Natural experiments and (quasi-)experimental studies (n = 1): In Ethiopia, receiving benefits through the PSNP was related to a lower likelihood of reducing expenditures on agricultural inputs (65).

Cross-sectional studies (n = 1): A study from 2022 investigated the role of the COVID-19 Urban Cash intervention in Malawi, which consisted of in-kind transfers (i.e. food) and in-cash benefits (67). Households that received social assistance were less likely to rely on savings than those that did not and equally likely to engage in additional income-generating activities. Programme participants further reported that they failed to cope after experiencing economic shocks during the pandemic, and they were more likely to rely on remittances from friends and family.

3.3.4.3 Social insurance (3 studies)

Irrespective of their design, all three studies showed that receiving social insurance in the form of unemployment benefits was associated with higher financial security in the form of housing security.

3.3.4.3.1 High-income countries (3 studies)

All three studies focused on the United States (48, 71, 73).

Natural experiments and (quasi-)experimental studies (n = 1): One study used a natural experiment approach and found that when increased unemployment benefits, provided under the Federal Pandemic Unemployment Compensation programme during the initial phase of the COVID-19 emergency, were discontinued, households reported an increased risk of missing housing payments (71).

Cross-sectional studies (n = 2): A study from 2021 observed an association between receiving unemployment benefits and having a lower risk of missing housing payments as well as increased confidence in being able to afford the next month's housing expenses (73). Another study from 2021 found that receiving unemployment benefits was significantly correlated with lower odds of eviction (48). However, the study also reported that these benefits were not sufficient to completely offset the association between financial hardship and housing eviction.

3.3.4.4 Other measures (6 studies)

Half of the studies (n = 3) showed positive effects of eviction moratoria (n = 1) and public employment programmes (n = 2) on financial and employment security. All three studies with positive effects had quasi-experimental designs.

3.3.4.4.1 High-income countries (3 studies)

Evidence comes from Chile (79) and the United States (74, 84).

Natural experiments and (quasi-)experimental studies (n = 1): A moratorium on evictions was associated with increased credit card spending and debt payment in the United States (74).

Longitudinal studies (n = 1): A longitudinal analysis from 2021 found no relationship between receiving a one-time tax credit and a score of financial distress in the United States (84).

Cross-sectional studies (n = 1): A study in Chile investigated a newly introduced option to withdraw funds from a privately managed pension system together with the provision of cash transfers (79). Programme participation was associated with a higher probability of rejecting a formal job offer. However, this result should be interpreted with caution, since the analysis did not account for confounders, raising concerns about residual bias.

3.3.4.4.2 Middle-income countries (2 studies)

Evidence comes from Armenia (81) and India (85).

Natural experiments and (quasi-)experimental studies (n = 1): One quasi-experimental study from India investigated the effect of the Mahatma Gandhi National Rural Employment Guarantee Act, a public employment programme for rural households involving 100 days of manual work, on publicly funded projects (85). Districts with a higher historical capacity of providing public employment were found to have higher rates of employment.

Cross-sectional studies (n = 1): Another study investigated the provision of subsidized utilities, finding no association with measures of financial security (81).

3.3.4.4.3 Low-income countries (1 study)

Natural experiments and (quasi-)experimental studies (n = 1): A 2023 study assessed the role of the PSNP in Ethiopia in a package that had an additional component to the provision of social assistance reported above – that is, a public employment programme for poor households offering participants 6 months of employment per year (65). During the pandemic, individuals were exempted from their work duties in the employment programme, but still received their income. The authors found that households enrolled in the PSNP were less likely to reduce expenditures on inputs for agricultural activities (Box 3).



3.3.5 Social protection and mental and physical health (15 studies)

Mental health outcomes included self-reported or diagnosed symptoms of depression, anxiety or stress; substance use (e.g. alcohol use disorders, illicit drug use); and domestic relationship outcomes (e.g. parenting problems, intimate partner violence).

In addition, physical health outcomes, such as self-reported health status, and access to and utilization of health care are reported in this section.

Key findings: The evidence suggests a positive influence of social protection policies and programmes on mental health. Cash transfers were found to improve mental and physical health and well-being in low- and middle-income, but not high-income, countries. The duration and amount of cash benefits, as well as the extent of financial insecurity, had roles in determining the effect size. The evidence for in-kind benefits is limited and results are mixed. The evidence about other social protection measures comes from the USA. Findings about consistently receiving unemployment benefits showed positive effects on mental health. Tax credits were found to be beneficial for physical health.

Types of benefits: The types of social assistance studied were in-cash benefits ($n = 8$), in-kind benefits ($n = 2$), unemployment insurance ($n = 4$), eviction moratoria ($n = 3$), and other measures, such as tax credits ($n = 2$) and a ban on utility shut-offs ($n = 1$).

Country income groups: Studies covered high-income ($n = 11$), middle-income ($n = 3$) and low-income ($n = 1$) countries.

Study design: The studies used experimental designs ($n = 4$), quasi-experimental ($n = 3$), longitudinal ($n = 2$) and cross-sectional designs ($n = 6$).

3.3.5.1 Social assistance – in-cash benefits (8 studies)

Seven of the eight studies assessed the effect of cash transfers on mental health, and four of those found a positive effect, albeit one not reaching statistical significance. Experiments from high-income countries focusing on mental health, intimate partner violence and general health status found null or inconclusive effects from a one-time cash transfer. An experiment from a low-income setting detected an improvement in mental health and health care-seeking behaviour among recipients.

3.3.5.1.1 High-income countries (4 studies)

One study from Australia (80), one from Canada (78) and two from the USA (52, 53) investigated the role of cash transfers.

Natural experiments and (quasi-)experimental studies ($n = 2$): Two randomized trials investigated the impact of a one-time unconditional cash transfer of the equivalent of 1 000 US or Canadian dollars to low-income households and individuals who reported struggling to afford basic necessities due to the COVID-19 pandemic. A study in Canada found no difference in general health status between intervention and control groups 2 weeks after the cash transfer (78). A study in the USA found inconclusive evidence about the effectiveness of a one-time cash transfer in improving mental health, and it found no effects on intimate partner conflict (53).

Cross-sectional studies ($n = 2$): One cross-sectional study focused on SNAP, a purpose-specific cash transfer programme for low-income households in the United States, which was adapted during the pandemic to provide higher benefits. The authors found lower rates of perceived stress among SNAP beneficiaries compared with non-participants (52). Another study reported that in Australia receiving the Coronavirus Supplement, a temporary income support payment for job-seekers, was associated with better mental health (80).

3.3.5.1.2 Middle-income countries (3 studies)

The evidence comes from Brazil (82), Colombia (57) and South Africa (86).

Natural experiments and (quasi-)experimental studies (n = 2): In an experimental evaluation, a one-time unconditional cash transfer to poor households in Colombia was found to result in a decrease in mental health issues, although the finding was not significant (57). A quasi-experimental study from South Africa investigated the impact of the Child Support Grant, a cash transfer programme for families that was scaled up during the COVID-19 pandemic (86). Results indicated that households that did not receive the benefit reported worsened health status, pointing to a protective effect of the benefit for households in cases of income shocks.

Cross-sectional studies (n = 1): One study evaluated the *Auxilio Emergencial* in Brazil, a newly introduced cash transfer system directed at unemployed low-income individuals (82). The results indicated that recipients reported similar levels of symptoms of poor mental health as did those who did not receive the transfer.

3.3.5.1.3 Low-income countries (1 study)

Natural experiments and (quasi-)experimental studies (n = 1): A one-time unconditional cash transfer provided to refugees in Uganda was found to result in a higher likelihood of recipients seeking health care at private facilities and in improved mental well-being (66).

3.3.5.2 Social assistance – in-kind benefits (2 studies)

Evidence consists of two cross-sectional studies from the USA that yielded mixed results.

3.3.5.2.1 High-income countries (2 studies)

Cross-sectional studies (n = 2): One study examined the association between perceived stress and the receipt of cash transfers from SNAP together with in-kind food transfers as part of the Special Supplemental Nutrition Assistance Program for Women, Infants and Children and school meals programmes (52). No association was found, likely pointing to the exacerbated strain on mental health during the COVID-19 pandemic in families that were already under financial pressure prior to the emergency. Another study found that expanded Medicaid coverage (i.e. health insurance benefits provided in kind for low-income individuals) and a ban on utility shut-offs were associated with lower levels of depression and anxiety (87).

3.3.5.3 Social insurance (4 studies)

Social insurance in the form of unemployment benefits in the USA appeared to have positive effects on mental health (n = 4). One study also showed that unemployment insurance contributed to improving health care-seeking behaviour.

3.3.5.3.1 High-income countries (4 studies)

Natural experiments and (quasi-)experimental studies (n = 1): A study from 2021 investigated the increase in unemployment benefits under the Federal Pandemic Unemployment Compensation programme in the United States (71). This natural experiment found that receiving benefits was related to lower risks of depression and anxiety.

Cross-sectional studies (n = 3): The same increase in unemployment benefits under the Federal Pandemic Unemployment Compensation programme was investigated in a cross-sectional study that confirmed the results of the quasi-experimental study: individuals who received benefits had less depression and anxiety, and a lower risk of delaying seeking health care (73). Another study investigated the role of several social policies at the state level aimed at countering emergency-related

income shocks for households, including unemployment benefits and other measures, such as tax credits and eviction moratoria (Section 3.3.5.4.1) (87). The study found that in states with stronger social protection systems, mental health was less affected by income shocks due to the pandemic than in states with weaker social protection (Box 4). A third study found that receiving unemployment insurance benefits was significantly associated with lower odds of anxiety and depression (48).



Box 4. In focus: The United States of America and comparative state-level social protection contexts and new policies

Within the United States' (USA) federated system of government, governmental responsibility for health and social policy rests largely at the state level, even in the context of federal social programmes (e.g. health insurance for those aged 65 and older or those younger than 65 who have a disability, known as Medicare, or health care for people with very low income, covered by the Medicaid programme). During the COVID-19 pandemic, the relative autonomy of the states permitted them to implement different socioeconomic policy responses.

A state-level comparative study focusing on several extant levels of social protection benefits as well as expanded benefits shed light on the importance of pre-existing social protection systems and the impacts of additional measures that could be expanded to alleviate the socioeconomic burden of health emergency shocks. The study compared information about the coverage of the following types of social protection benefits:

- general labour and fiscal measures – the Earned Income Tax Credit social benefit helps low- to moderate-income workers and families reduce their taxes. The amount of tax credits received may depend on whether a household has children or other dependents, or on whether someone lives with a disability or meets other criteria;
- health insurance coverage – the study considered Medicaid and the Affordable Care Act (a federal policy and programme) and whether a state expanded eligibility for Medicaid under the Act;
- in-cash benefits (unemployment insurance) – the weekly maximum amount of unemployment insurance in 2020 ranged between US\$ 190 and US\$ 823, and a state's maximum number of weeks during which workers could collect unemployment insurance ranged between 12 and 28 weeks (US Department of Labor). The value of these measures was assessed before the CARES Act (Coronavirus Aid, Relief and Economic Security) was passed in March 2020 and the Coronavirus Response and Consolidated Appropriations Act (2021) was passed in December of 2020, which were federal acts implemented similarly across states.
- new state social policies assessed included whether a state –
 - o adopted a moratorium on evictions;
 - o banned utility shut-offs (i.e. a utility or financial fee waiver).

Evidence of state contexts for social protection policies reducing negative mental health impacts during the COVID-19 pandemic

Households that experienced an income shock during the pandemic were less distressed if they lived in states with more generous unemployment insurance and where Medicaid coverage was expanded. These findings relied on comparative diversity between states but also suggested that the CARES Act – which was implemented across the states – would also have had large positive benefits for the mental health of unemployed workers.

3.3.5.4 Other measures (4 studies)

Limited evidence from the USA indicated there were positive associations between social protection and mental health outcomes. Moratoria on evictions ($n = 3$) were generally associated with better mental health.

3.3.5.4.1 High-income countries (4 studies)

Natural experiments and (quasi-)experimental studies ($n = 1$): A natural experiment in 2022 found that implementing a statewide moratorium on evictions led to a significant decrease in distress for beneficiaries in the form of worrying thoughts (74).

Longitudinal studies ($n = 2$): Receiving a one-time tax credit as part of an Economic Impact Payment was associated with a lower number of medical conditions and lower prevalence of alcohol use disorders (88). However, receiving the payment was not related to anxiety symptoms or to the use of illicit drugs. Additionally, benefit recipients reported higher stress levels, and had a higher prevalence of depression and higher frequency of suicidal ideation. In line with the findings of the natural experiment, another study showed that strong protection against eviction at the state level was related to lower levels of psychological distress (89).

Cross-sectional studies ($n = 1$): A study from 2021 investigated the role of several social protection measures implemented at the state level, including a moratorium on evictions and also the use of unemployment benefits, tax breaks and other measures (Section 3.3.5.3.1) (87). Results indicated there were better mental health outcomes in states with stronger social protection systems (Box 4).



3.3.6 Social protection and social attitudes (2 studies)

Key findings: The limited number of studies ($n = 2$) suggested there were positive effects from cash transfers on social attitudes, such as social cohesion, cooperation and trust.

Types of benefits: Both studies assessed the use of in-cash social assistance.

Country income groups: The two studies took place in middle-income countries.

Study design: The studies were quasi-experimental.

3.3.6.1 Social assistance – in cash benefits (2 studies)

3.3.6.1.1 Middle-income countries (2 studies)

Evidence comes from Colombia (57) and Kenya (90).

Natural experiments and quasi-experimental studies ($n = 2$): One quasi-experimental study from Colombia reported that receiving unconditional cash transfers was related to higher support for governmental programmes, such as emergency assistance for households, and a higher probability of social cooperation (57). Other dimensions of political attitudes were not affected. The other study investigated the provision of cash transfers to vulnerable households through the National Safety Net Programme and the Hunger Safety Net Programme in Kenya (90). The results indicated that receiving cash transfers may have led to improved measures of social cohesion, including trust in government, trust in parliament, inclusive identity and horizontal cooperation, albeit the results were not significant.



3.3.7 Social protection and educational investment (1 study)

Key findings: One experimental study from Colombia (Box 5) reported that receiving unconditional cash transfers worth US\$ 19.00 (equivalent to purchasing power parity of US\$ 55.60) paid three times every 5 to 8 weeks led to higher investment in children's education, in the form of more frequent payments for tutoring (57).

Types of benefits: The study assessed in-cash social assistance.

Country income groups: The study was conducted in a middle-income country.

Study design: The one study was experimental.



Box 5. In focus:

Colombia's emergency social assistance cash transfer programme

In March 2020, Colombia rolled out a new unconditional cash transfer programme to 1 million households living in poverty. The cash transfer was paid every 5 to 6 weeks. The amount of the transfer represented approximately 8% of the monthly minimum wage in 2019 or less than US\$ 0.18 per adult per day.

To estimate the effects of the emergency social assistance cash transfer, a study of a subset of beneficiaries of Colombia's main ongoing conditional cash transfer programme (known as Ingreso para la Prosperidad Social, or the Social Prosperity Income Programme), living in extreme poverty, was randomly selected to be part of a randomized controlled trial to assess the impact of receiving the additional cash. The following impacts were noted:

- food insecurity and financial insecurity – the unconditional cash transfer had positive effects on recipients – that is, the additional money improved food access by 6.1%, and more than 90% of households reported spending the unconditional cash transfer on food, although impacts on indicators of food security – such as reporting zero meals per day, eating at a friend's or relative's home, or begging for food on the street – were not detected;
- social attitudes and cohesion – qualitative data and analyses showed that the cash transfer boosted social cooperation, and there was some anecdotal evidence of an overall high level of trust in government and support for quarantine among all recipients of cash transfers;
- educational investment – parents' investments in children's education in the form of more frequent payments for tutoring were observed among recipients of the cash transfer.

3.4 Results from qualitative studies (25 studies)

Evidence reported in qualitative studies covered countries from all income levels as well as a broad range of experiences, from the perspectives of homeless people, international students, migrants and workers in precarious employment. The findings provide a mechanism to further explore how inequities arose through the large-scale implementation of PHSM and their disproportionate negative consequences for vulnerable and marginalized population groups, thus complementing findings in the quantitative studies.

The qualitative findings are summarized according to three themes: (i) challenges faced by people living in vulnerable conditions, (ii) the provision and adaptation of social protection policies and programmes and (iii) the effects of social protection policies and programmes as reported by beneficiaries. The patterns described through these studies are not representative of all affected communities but rather exemplify the manifold challenges of individuals living in conditions that made them more vulnerable to the COVID-19 pandemic and the unintended consequences of PHSM implementation.

3.4.1 Challenges faced by people living in vulnerable conditions (8 studies)

The so-called lockdowns were probably the most disruptive pandemic response measure for societies. While there is no one definition of what a lockdown constitutes in the context of a pandemic response, most studies using the term refer to the strict and parallel implementation of a combination of PHSM, often entailing stay-at-home orders, international travel restrictions, and school and business closures. Qualitative studies examining the consequences of lockdowns for vulnerable and marginalized populations emphasized that the measures often meant a loss of employment and income, especially for those working in the informal economy or other precarious conditions (91, 92). The inability to sustain one's own and the family's livelihood often led to significant distress and poorer mental health and well-being (66, 93). A study from Bangladesh that included informal workers illustrated the severity of unemployment-associated fears and worries on health, as it described some study participants as showing risks of suicide (92).

The reported qualitative insights help to clarify findings from quantitative studies about a deterioration in food security during the COVID-19 pandemic. Qualitative studies show that job losses and school and business closures due to lockdowns exacerbated food insecurity among the most vulnerable, with aid programmes often not being sufficient to offset the additional burdens, for example due to outdated administrative systems, exclusions of migrants and challenges in implementation (94). It was reported that more food was consumed when families were engaged in home-schooling and working from home, which resulted in challenges to financial well-being (95).

Concomitantly, a greater need for social and health services was reported, including counselling services (91). Despite the need, migrants in some settings, particularly undocumented migrants, were afraid of using them (93, 96). People experiencing homelessness in the United Kingdom indicated to require more support services, amongst others due to the reduced access to illicit substances. Restrictions on mental health support services – in terms of both increased difficulty accessing services and fewer services being offered – were particularly difficult for populations experiencing isolation, financial issues and a lack of social interaction. Closing day centres for people experiencing homelessness also meant that there were fewer safe spaces, and also donations to day centres were reduced (91).

Also, international students were vulnerable to the repercussions of stay-at-home orders, travel restrictions and university closures, especially if they were ineligible for government support. For example, international students residing in Australia and the USA had to take on precarious, low-wage jobs to cover their basic needs, jobs they would not have accepted prior to the pandemic (93, 97). The lack of social protection forced students to be non-compliant with PHSM and, hence, put them at greater risk of becoming ill with COVID-19. Among other issues, students reported worries about getting sick while working (95), that they had to move to crowded and more risky accommodation to save money (93) and that they needed to resort to food banks.

In general, stay-at-home orders were perceived as draining and detrimental to mental health, resulting in some workers in precarious employment conditions turning to “gig work and the essential jobs that were hiring”, allowing them to engage in meaningful activity rather than “feeling trapped at home” and applying for unemployment assistance (97).

3.4.2 Provision and adaptation of social protection policies and programmes (25 studies)

3.4.2.1 Addressing food insecurity

The wide implementation of PHSM, such as stay-at-home orders, business and service closures, and mobility restrictions, hampered access to social protection benefits. This was particularly true for programmes requiring interpersonal contact for benefit disbursement, as was observed in, among others, Bangladesh (98), India (99) and Zimbabwe (100). Where in-person service provision continued despite the pandemic, programme coordinators faced difficulties in ensuring safe access to benefits, for example by maintaining the recommended physical distance (98). However, the preferences of beneficiaries also affected the provision of services. In India, beneficiaries preferred to receive cash in person instead of through banks due to administrative barriers (101), increasing the risk of virus exposure for all involved and increasing the organizational burden on those responsible for the programme. Notably, this preference was influenced by factors requiring institutional solutions, such as limited financial and digital literacy, delays in receiving notifications from the banks regarding credited funds and the lack of access to smartphones, which posed challenges to adopting digital banking. Elsewhere, in countries with administrative processes in place to support adherence to PHSM while distributing social protection benefits, such as crowd control through scheduled appointments and the onsite provision of masks, service continuity could be ensured, as was the case in Sumberjo village in Indonesia (102).

Vulnerable and marginalized populations were more likely to suffer from programme disruptions: for example, delays occurred in Zimbabwe in disbursing cash transfers for poor and vulnerable households due to the emergency, and only 22% of informal workers actually accessed the funds specifically introduced to aid them during the pandemic (100). These findings highlight the need for resilient social protection systems that are ready to face major emergencies and disasters, for example, by ensuring adaptable service delivery infrastructure and scalable policies and programmes.

The health crisis also exposed gaps and limitations in social protection systems pertaining to a lack of universal coverage and inclusion. The social protection systems in existence that were not adapted or modified during the pandemic, often did not cover migrants, informal workers or marginalized groups (92, 93, 103, 104). Some countries opted instead to provide in-kind support to population groups excluded from the regular social protection system; for example, the state of Kerala in India provided fuel, food and accommodation to migrants (105). These observations highlight the need to design social protection systems based on principles of universal inclusion and equity to ensure everyone is protected from financial hardship due to unemployment, disability or sickness (30).

Even when there was broad coverage of a programme, especially vulnerable and marginalized groups were not always able to access their benefits or aware they were eligible to receive them (97, 100, 105, 106). In some cases, the reluctance of beneficiaries to accept social protection was linked to stigma, for example in New York, USA, where one study found that accessing unemployment insurance was associated for some with the notion of weakness and giving up (97). Ensuring there is community involvement and inclusive social dialogue can facilitate the identification of barriers to accessing social protection benefits and inform the design of tailored interventions and communication strategies to address them (30).

Barriers to accessing in-kind food programmes were similar to those affecting service delivery of in-cash programmes – that is, disruption of usual in-person provision mechanisms, complexities around accessing benefits, lack of clarity about eligibility for both providers and recipients, as well as perceived stigma for receiving support (94, 95, 107, 108).

In addition, the direct provision of food was not always stable due to supply chain issues caused by the pandemic and related business and trade restrictions, making programmes unpredictable and inefficient in some places (94, 95, 100). Also, the quality and quantity of food provided was not always adequate (66), with people at times receiving expired food (95). In-kind food provision delivered through vouchers or store credits also had limitations. Vouchers sometimes led to changes in purchasing behaviour, with recipients opting for more expensive products than usual and stores removing previous price reductions or offers in response to clients using vouchers (108). Notably, vouchers required beneficiaries to leave the house to use them, increasing the risk of COVID-19, especially among vulnerable groups (107). The delivery of food baskets was one method used to address this issue (109) and demonstrated the usefulness of evaluating social protection programmes by applying social and behavioural science methods to understand the barriers to service delivery and to design remedial strategies.

PHSM directed at reducing contacts negatively affected the secondary social functions of programmes such as food banks that had previously served as a space for social interaction and community building (110).

3.4.2.2 Addressing housing insecurity (4 studies)

During the COVID-19 pandemic, shelters that otherwise protect unhoused people became potential hotspots for infection, putting an already vulnerable group at even greater risk for illness (92, 111). While housing-first approaches (i.e. the unconditional provision of housing) were useful for preventing COVID-19, they were also found to cause loneliness because people were no longer in communal shelters (111).

The United Kingdom launched an everyone-in scheme during the pandemic, providing access to wrap-around support (i.e. a collaborative, person-centred intervention) and emergency housing. However, there were concerns about the sustainability of the programme's achievements, as the scheme ended after the first national lockdown (91).

One study described an eviction moratorium programme in the United States and related efforts to inform eligible groups about it (112). Multisectoral collaboration and cooperation with community organizations offered new ways to increase programme participation despite restrictions related to PHSM implementation, for example through media outreach, in-person meetings in underserved communities or door-to-door campaigns that reduced the need for households to reach out to the systems. However, study participants also described hidden challenges to accessing benefits, such as not having a bank account or the costs related to banking.

3.4.3 Effects of social protection policies and programmes as reported by beneficiaries (8 studies)

Qualitative reports about the effects of social protection measures complement the quantitative findings, showing mainly positive impacts for beneficiaries on food security, mental health and the alleviation of financial distress (66, 95, 108, 109, 113). One study found that the positive effects were stronger for households that received cash transfers early on during the pandemic (66).

Cash transfers were also reported to increase access to health services (66). Another study reported that beneficiaries traded ration cards for money, which was said to help make life easier during the economic hardship associated with lockdowns (104). Additionally, those who received loans noted there were increases in financial distress and also an economic burden on the household when repayment was expected, independent of the employment situation of the beneficiary, highlighting the need to design sustainable programmes with adequate time to phase out the transfers (104).

Newly introduced emergency housing programmes were more inclusive, meaning that vulnerable groups, such as people who were unhoused or substance users, who were previously often not reached by services, were specifically targeted to receive support and housing (91).

Migrants described several positive aspects of being newly included in social protection schemes throughout the course of the pandemic: benefits offset the need to move into more remote, crowded or less safe housing to save costs, and recipients reported they were in better mental health and more food-secure without having to engage in dangerous or exploitative employment (93). In addition, study participants described feeling better integrated into their host society.

4. Discussion

4.1 Summary of results

This scoping review recorded an expansion of existing social protection schemes by more than 500 new policies and programmes in 123 countries in studies published between March 2020 and August 2022. Furthermore, 272 existing policies were adapted to expand coverage or benefits to better suit the increased need during the health crisis. These findings are in line with policies recorded by the ILO Social Protection Monitor (114) and the World Bank (37), both of which noted that due to low coverage or completeness of social protection systems in many countries prior to the pandemic, it is likely that more new policies were introduced than existing ones expanded. For example, informal workers, who constitute close to 89% of the workforce in low-income countries and close to 60% globally (115), are usually excluded from contributory social protection schemes, but they may have been included during the pandemic, albeit often temporarily, to contain COVID-19 community transmission and to allow them to adhere to PHSM. These changes explain why this review located a relatively high number of studies from low- and middle-income settings independent from the overall development level of their social protection system: they were instituting more new social protection programmes (Box 6). Where possible, most countries implemented existing, adapted and new social protection measures simultaneously during the pandemic, but publications are likely to focus on adapted or new programmes. This is also in line with the findings that social protection is one of the most counter-cyclical types of public expenditure, and that social assistance spending has typically been more responsive during economic contractions, including during the COVID-19 pandemic (116).



Interplay between social protection and PHSM adherence



Box 6. In context: Social protection and public health and social measures

The strength of social protection systems differs not only between countries at different income levels but also between countries in the same income category. Such differences relate to, for example, financing, accessibility, the extent of implementation and the types of benefits. The possibility to introduce new and scale up existing social protection policies and programmes in response to a health emergency, as well as resilience to the socioeconomic impacts of an epidemic or pandemic, hence, are context-dependent (e.g. contingent on the scale of the informal economy in a country) and largely influenced by the pre-emergency status of the welfare state (117). The evidence about the role of social protection reported here reflects both what researchers chose to focus on as the major social determinants of health impacted during the early phases of the COVID-19 pandemic and how different governments responded to the pandemic in their given context and with their existing social protection system.

Several international organizations provided guidance on implementing and monitoring social protection policies and programmes during the COVID-19 pandemic (30, 114, 118-120). The United Nations launched a draft framework for implementing an immediate socioeconomic response to the COVID-19 pandemic (121) and the Human Rights Council published a report on the subject (122).

Of the 316 studies documenting social protection measures, 44 provided a comparative assessment of the relationship between social protection and health and socioeconomic consequences.

The main negative consequences of PHSM and the pandemic that were addressed were please replace with: food insecurity ($n = 32$), financial and employment insecurity ($n = 18$), mental and physical health ($n = 15$), quality of diet ($n = 2$), social attitudes and cohesion ($n = 2$), and educational investment ($n = 1$). Most studies assessed the effect of a range of social protection measures on multiple outcomes.

While this report groups results by the unintended consequences addressed and type of social protection benefit, it is important to note that social protection programmes often consist of multiple components (e.g. a combination of in-cash and in-kind benefits), so it is not always possible to fully disentangle the effects of the individual components of an intervention.



4.1.1 Food insecurity

The evidence supports the importance of social protection to sustain food security during emergencies. The more methodologically robust studies especially confirm positive impacts of social assistance, social insurance and other measures on food security across country income levels.

In-cash benefits: Half of the studies (11/22) found that cash transfers improved food security, with six out of eight (quasi-)experimental studies showing positive effects. This holds true across country income levels. The other half showed mixed or null relationships, but the majority (8/11) were cross-sectional studies, so this finding might merely point to the fact that the recipients of cash transfers are far more food insecure than the rest of the population and the transfers may not have been high or frequent enough, or both, to counter the additional burden of the pandemic.

In-kind benefits: A total of five out of 14 studies, three of which were natural experiments, showed the positive effects of in-kind support on food security, highlighting the importance of further investigation into the reasons for mixed and null results, including assessing barriers to access and inadequate types and amounts of benefits.

Social insurance: Four out of seven studies reported a positive association between social insurance and food security, and one showed mixed effects. All three natural experiments confirmed the value of social protection. Five studies from the USA focused on unemployment benefits, with four of those yielding a reduction in food insecurity among benefit recipients.

Other measures: Measures such as tax credits ($n = 2$), minimum wage policies ($n = 1$), loans to small business owners ($n = 1$) and a multistimulus programme ($n = 1$) were found to be beneficial for food security. One natural experiment evaluating eviction moratoria found mixed effects.

In terms of inequity, described as whether some populations benefitted more than others after receiving social protection, the evidence from three studies highlights the positive effects these programmes had on reducing food insecurity and improving mental health outcomes across different racial, ethnic and socioeconomic groups.



4.1.2 Quality of diet

The very limited evidence from two studies looking at social assistance and quality of diet did not find any effects.



4.1.3 Financial and employment insecurity

The evidence illustrates the beneficial effects of social insurance, but presents a more mixed picture for other social protection measures. The high ratio of mixed effects is likely due to the measurement of the several, very heterogeneous indicators that were used to assess financial and employment insecurity, raising questions about adequate construct and measurement validity.

In-cash benefits: Only two out of 12 studies showed a clearly positive relationship between cash transfers and financial security; five found mixed effects; four found null effects; and one showed a negative result. Results are independent of a country's income level. Cash transfers delivered in combination with other measures or more than once, or both, appeared to yield better results.

In-kind benefits: All programmes in four studies comprised in-cash and in-kind components; three cross-sectional studies showed mixed effects; and one natural experiment found a positive effect of social protection. All studies were from low- and middle-income countries.

Social insurance: All three studies found that recipients of unemployment benefits were more financially secure and able to make housing- and rent-related payments than those who were not covered by unemployment insurance. Evidence comes from high-income settings.

Other measures: Three out of six studies – one looking at an eviction moratorium and two assessing public employment programmes – all of them being quasi-experimental, found a positive effect of social protection on financial and employment security.



4.1.4 Mental and physical health

In line with the pathway of the social determinants of health, the evidence supports a positive effect of social protection on mental and physical health.

In-cash benefits: Seven out of eight studies focused on mental health. Five studies found a positive relationship between cash transfers and health, and the results of one study were inconclusive. It appears that, especially in high-income countries, the amount of cash transferred was not sufficient to fully offset the negative effects of the pandemic and PHSM.

In-kind benefits: Two cross-sectional studies came from the USA and focused on mental health. One found that the expansion of the Medicaid programme (i.e. health insurance benefits provided to low-income individuals) combined with a ban on utility shut-offs was linked with lower odds of anxiety and depression; the other study did not detect any relationship between social assistance and stress.

Social insurance: The evidence from four studies indicated that social insurance improved mental health ($n = 4$) and health care-seeking behaviour ($n = 1$). All studies focused on unemployment benefits and came from the USA.

Other measures: All four studies came from the USA, and three found positive effects of eviction moratoria on mental health. A longitudinal study assessing a one-time tax credit found that the measure was beneficial for physical health and for reducing harmful alcohol use, but there was no relationship with anxiety and the use of illicit drugs.



4.1.5 Social attitudes and cohesion

Two studies from middle-income countries using a quasi-experimental design found positive relationships between cash transfers and social attitudes, such as support for emergency measures, social cohesion and trust in government, albeit the findings of one study did not reach statistical significance.



4.1.6 Educational investment

One experimental study from Colombia found a positive effect of repeated cash transfers on recipients' investments in their children's education.

4.1.7 Qualitative findings

The evidence from 25 qualitative studies included in this review reinforced the usefulness of social protection for health and pointed to positive associations between social assistance and food and housing security. Findings also highlighted the power of social protection to help vulnerable and previously marginalized populations feel included in society. However, the studies also emphasized the complexity of providing social protection, including the need to address access barriers for different groups, challenges in administering these interventions, particularly in emergency settings, and in identifying the most vulnerable populations.

4.2 Strengths and limitations

This review brings added value to efforts to strengthen health emergency management not only by taking an expansive approach to identifying social protection measures but also by making explicit linkages to the negative consequences of health emergencies, particularly in the context of mitigating the unintended negative consequences of PHSM. The review focuses on the critical role of social protection measures in maintaining the well-being and livelihoods of individuals and communities during large-scale infectious disease outbreaks, and it provides a strategic evidence base about integrating social protection measures into emergency preparedness, response and resilience activities.

There are some limitations. First, not all studies and reports were peer reviewed, an issue that attempted to counter with clear reporting of a study's methods. Second, only the WHO COVID-19 Research Database was used as an academic database; and although it is known to be comprehensive, relevant studies may have been missed. This was addressed by undertaking an expansive search of literature from different organizations. Third, because scoping reviews usually do not include a quality assessment, a coarse categorization of studies was used, based on their methodology. In addition, only measures that were reported could be identified, possibly giving rise to a bias towards new and adapted measures over insights into well-established social protection systems. It is important to point out that as both research funding and publishing are subject to requirements of novelty, this is likely to undermine evidence about the role and expansion of existing social protection systems. Thus, while this scoping review can provide an understanding of which kinds of measures were initiated and reported on, it does not consider all of them and does not allow for comparisons across countries or social protection systems. Further, most studies did not provide the rationale for why policy-makers chose to implement one policy over another, nor did they analyse the impact of funding (i.e. unavailability) on policy decisions.

Fourth, other issues that hamper drawing an overarching and generalizable conclusion were the heterogeneity of measures, contexts and outcomes, often analysed in bundles or packages of policies, with an overrepresentation of some countries and underrepresentation or absence of studies for others. It is not always possible or desirable for a study to assess complex social interventions to fully disentangle the effects of the individual components of an intervention. In reality, different measures are applied in combination and from dissimilar starting points, and their impacts result from these combinations. To address the context of measures, the World Bank categorization of countries based on their income level was used to differentiate findings and to address bundling; when multiple impacts were observed, these combinations were also reported.

Fifth, social security systems and the type or amount of benefits granted may also vary considerably within these income categories, so a careful and contextual interpretation of findings is needed.

Sixth, a further complication is the articulation of indicators of outcomes. Several studies showed mixed results due to the use of multiple indicators for the same outcome. For example within one study, financial security could be measured as the ability to pay rent, pay for food and necessities, and whether participants needed to use savings or borrow money from friends and family, with some variables being positively associated with the social protection measure and some not; hence, the question may be about indicator reliability and validity rather than construct validity.

Finally, in many of the studies in this review, it was impossible to quantitatively distinguish between the impact of PHSM and the effects of the COVID-19 pandemic, as they are inextricably linked, and the pandemic may have changed the behaviour of many people, even without PHSM (120). While PHSM were instrumental in averting severe disease and deaths during the pandemic, measures

such as stay-at-home orders, and closures of businesses, schools or borders, have undoubtedly had health and socioeconomic consequences beyond the disease itself that could be reduced by taking a more evidence-informed and equitable approach towards the implementation of PHSM (123, 124).

4.3 Implications for generating evidence on social protection in the context of health emergencies

Based on the findings and limitations of the assessed evidence discussed above, several priorities for generating evidence about social protection in the context of health emergencies have emerged, including the needs to:

- diversify the geographical coverage of studies – Prioritize conducting studies in a wider range of geographical settings, particularly in low- and middle-income countries, to obtain context-specific evidence with relevance for priority settings;
- prioritize robust study designs – Invest in robust research using longitudinal and experimental designs or ensure there is adequate control of confounders to establish causal links and comprehensive insights into the effectiveness of social protection measures implemented during health emergencies;
- make contextual comparisons – Select appropriate comparators in research studies. Instead of comparing social protection programme recipients to the general population, comparing them to populations with similar characteristics at baseline may be more meaningful;
- conduct implementation science – Use implementation science to understand the mechanisms through which social protection measures influence health equity during emergencies. This approach will help identify what works and why, and how certain interventions are effective in specific contexts;
- conduct value assessments – Investigate the real value of transfers provided within social protection programmes. Comparative analyses of the effectiveness of different transfer amounts across diverse settings can offer insights into cost-effectiveness and programme efficiency;
- evaluate the efficiency of policy implementation – Study the efficiency of implementing different types of social protection measures during emergencies, particularly comparing the efficiency of adapting existing policies and programmes versus introducing new ones;
- test interventions outside of the emergency context – To gain insight into equity and, in particular, the social determinants of health equity, research and analyses that extend beyond emergency conditions are required to examine the wider crisis resilience of health and social protection systems;
- promote multidisciplinary and multisectoral research – Assessing the impact of social protection during health emergencies requires collaboration among various disciplines and actors to understand how interventions implemented in the social sector influence behaviour and determinants in relation to health and well-being;

- apply an equity lens – To protect the most vulnerable groups, disaggregate data by social, economic, demographic or geographical characteristics to uncover the equity effects of social protection measures introduced or scaled up during emergencies;
- acknowledge complexity and prioritize evidence for decision-making – The evaluation of complex interventions, such as social protection policies or PHSM, is characterized by methodological challenges in measuring and disentangling effects and causal pathways. While striving for more innovative research approaches, the main objective should be to provide relevant, actionable and fit-for-purpose evidence to inform decision-making about policies to save lives and livelihoods.

4.4 Implications for integrating social protection into health emergency preparedness and response

The findings of this review have revealed the essential linkages between access to adequate social protection and the impact of health emergency preparedness and response activities, including PHSM. This allows for drawing practical implications to further integrate the social determinants of health and equity considerations into emergency management strategies, albeit considering the limitations of the evidence and the review’s methodology.

- **The development of strong social systems outside of emergencies will make them more efficient and resilient to emergencies:** For social protection to be an effective tool for prevention, preparedness and response, it requires the establishment and strengthening of national social protection systems that act in synergy with universal health coverage policies. Yet few of the studies included the medium- and longer-term impacts of the social protection measures evaluated. This may be partially due to the methodological focus of the studies (i.e. the lack of longitudinal studies), but it may also be rooted in the fact that most social protection measures implemented during the pandemic were stopgap measures that were not sustained (30). This brought to light the gaps in administrative systems and social protection coverage, and it supports the literature, which suggests that it is more efficient to build systems outside of emergencies to ensure they can be adapted when emergencies occur, for example by expanding coverage and eligibility (125). Because social protection is a human right, it should not be geared solely towards protecting people in emergency situations but towards all contingencies. Strong social protection systems are able to support people in the long term and build resilience against future crises. This is also recognized by the global architecture for health emergency prevention, preparedness, response and resilience (35).



Social protection to strengthen communities’ resilience against health emergencies

- The effect of social protection is tied both to the context and its implementation, and also to the population:** The qualitative findings from this review suggested that migrants and refugees, as well as members of minority groups, were more at risk of negative impacts from COVID-19, and also more at risk of not being able to access social protection, which is in line with previous research (21). This illustrates the complex effect pathway between social protection and PHSM, and it has important implications for equity. During an infectious disease outbreak, PHSM are implemented to reduce transmission and protect individuals from illness and death. However, individuals can engage in protective actions only if they are not in conflict with other basic needs, such as income, food or housing security. To maintain livelihoods during a crisis that affects living, educational and working conditions, social protection measures are needed, such as unemployment benefits or paid sick leave. Without these safety nets, people are less able to adhere to PHSM and, hence, at greater risk for becoming ill. Which measures are needed to promote adherence to PHSM and how they should best be delivered, remains relatively unclear. In addition, people who are excluded from social protection systems are often living in conditions of vulnerability, making them more susceptible to severe consequences from a disease and increasing social and health inequities. Universal coverage of social protection and measures specifically targeted to those most in need (Box 7) boosts the effectiveness of PHSM by providing more opportunity for adherence, which has beneficial spillover effects for the entire population and offers the chance to address equity gaps.
- The context-specific design of countries' social protection systems determines the course of action during health emergencies:** The design and coverage of social protection systems differ according to the specific characteristics, governance and financing mechanisms applied in each country, and this often depends on factors such as levels of income and spending, and informal and formal employment rates. For example, this review found relatively few studies examining the effects of unemployment insurance, particularly in low- and middle-income settings. The lack of evidence from lower-income settings is likely due to the absence of unemployment protection policies in low- and middle-income countries (126). While some countries have put in place universal guarantees, the extension of unemployment insurance seems to be constrained by high levels of participation in the informal workforce, with the average proportion of informal employment representing, for example, 86.5% of the workforce in sub-Saharan Africa (126). With existing gaps in social protection generally, people have no choice but to agree to poor employment conditions, leading to an increased vulnerability to negative consequences of emergencies and other contingencies. For low- and middle-income countries, extending social protection, including to workers in the informal economy, relies on their legal inclusion, combined tax-funded and contributory mechanisms, the introduction of simplified and digitalized administration, improved compliance with the legal framework underlying social protection systems, incentives to join social insurance and measures to encourage business registration. Understanding more thoroughly the importance of expanding social insurance to the informal sector could positively impact the extension of unemployment protection to more workers. Hence, having a clear picture of social protection coverage and gaps, including the impact of funding (or lack of funding) on government capacities to deploy social protection, is indispensable to understand opportunities for activating additional and scaling up new measures during a crisis. Such a picture can also provide an indication of emerging vulnerabilities and population groups most at risk and, hence, help to prioritize action. Adopting approaches such as Health in All Policies can facilitate regular multisectoral collaboration (36, 127) and promote the swift establishment of cross-sectoral emergency coordination mechanisms (35).

- Evaluate emergency social protection measures to understand whether they achieve the desired impact and reach those who are most in need:** As the results of this scoping review show, assessing the effectiveness of social protection policies and programmes is challenging. [Section 4.3](#) provides insights into how to strengthen the robustness of study designs. As part of complementary efforts, household monitoring systems on inequality (128) and poverty (129) can be used to better understand people’s conditions and needs during and outside of emergencies. For example, from 2020–2022, the World Bank in collaboration with countries conducted regular phone surveys that fed data into the World Bank’s COVID-19 Household Monitoring Dashboard, which provides information about “over 100 nationally representative indicators on topics like food security, employment, income loss, access to safety nets, and household coping strategies” (130). The use of observational data can help to identify priority actions for support, gaps in coverage and issues in service delivery and access, thus aiding in improving the efficiency and reach of emergency social protection policies and programmes.



Box 7. In context: Adapting social protection measures to the COVID-19 pandemic

Oppel examined the importance of universal policies as a response to the COVID-19 pandemic and found that governments with comprehensive social protection systems responded with targeted allocations, whereas governments with less comprehensive systems relied more on universal measures (131). This could be because targeting during a crisis is difficult and prone to errors, as well as because existing mechanisms and resources are needed to ensure a system’s functionality (132). Hence, in low-income countries with less comprehensive social protection systems and a higher proportion of people in need, such as those living in poverty or in precarious working conditions, the universality of the social protection response during a crisis can be a good option. A universal approach also provides a social protection floor – that is, a safety net for all – allowing for additional support to be targeted to the most vulnerable groups to address equity.

5. Conclusion

The findings of this review corroborate other sources of evidence (30, 37, 116) about the unprecedented extent of social protection measures implemented during the response to the COVID-19 pandemic, and they complement the evidence by adding an assessment of the relative impact of measures in cushioning the socioeconomic impacts of the pandemic. To further strengthen the evidence base about the role of social protection during health emergencies, innovative methods are needed, including multidisciplinary approaches and long-term evaluations of policies and interventions. This knowledge is required to design equitable and effective PHSM implementation packages that include mitigation measures that suit different social protection policy contexts and contexts in which there are different social determinants of health for the population.

The COVID-19 pandemic revealed the existing inequalities in our societies, emphasizing the urgent need to address these disparities before and during future crisis responses. Concerningly, in the wake of the economic shocks of recent years, the financing gap to achieve minimum social protection for all has increased by about 30%, leaving 4.1 billion people worldwide excluded from income security (133) and, hence, further increasing their risk for poverty and their vulnerability during future emergency situations and climate change crises (134). Political commitments are needed – including adequate and sustained financing, responsive administrative and delivery systems, and multisectoral and multilateral partnerships – to build resilient health and social systems adept at facing the many concurrent crises of these times. Only once these are in place will countries be able to rapidly activate and scale up social protection measures during emergencies, implement PHSM to leverage their public health benefits while reducing unintended negative consequences, and establish robust strategies for future health emergencies.

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Annex 1. Methodology of the scoping review

The scoping review followed the Arksey and O'Malley methodology (1), which involves six steps: (i) identifying the research question; (ii) identifying relevant studies; (iii) selecting the studies; (iv) charting the data; (v) collating, summarizing and reporting the results; and (vi) performing a consultation exercise. The last component, the consultation exercise, is optional and will be conducted following the publication of this review to identify policy options in consultation with multisectoral policy and practice stakeholders.

Step 1: identifying the research question

The focus of this review was to understand the existing knowledge about social protection policies and programmes that mitigate the negative unintended consequences of public health and social measures (PHSM) globally, with a particular focus on their impact on equity and the social determinants of health.

The guiding question informing this evidence summary was: what is the landscape of the evidence on social protection policies implemented during the COVID-19 pandemic that attempted to mitigate the unintended negative socioeconomic consequences of PHSM and their impact on the social determinants of health? Answering this question includes gathering information about (i) the type of social protection measure, (ii) its geographical location, (iii) the target groups, (iv) the targeted contingency or vulnerability, and (v) the reported effects (for a subset of studies).

Step 2: identifying relevant studies

Studies published between March 2020 and August 2022 were included in this review. On 25 August 2022, a search was conducted in the WHO COVID-19 Research Database. This Database (2) was chosen because it was a resource specific to COVID-19 that contains references from more than 20 sources that are related to COVID-19, severe acute respiratory infection coronavirus 2 (SARS-CoV-2) and the COVID-19 pandemic.

These sources include bibliographic databases, and preprint and grey literature sources. This approach was complemented by targeted searches for grey literature up until March 2023 from the World Bank, the International Labour Organization (ILO), the United Nations (UN) Children's Fund, International Social Security Association, the Organisation for Economic Co-operation and Development, UN-Habitat, the UN Department of Economic and Social Affairs, and the World Health Organization's (WHO) Institutional Repository for Information Sharing (known as IRIS), as well as up until September 2022 from Google Scholar. Blocks of keywords were developed to search the databases and the grey literature. The search focused on social protection measures that were implemented during

the pandemic. As the WHO COVID-19 Research Database was exclusive to COVID-19 information, no pandemic-related terms were included. For the detailed search strategy, refer to [Annex 2](#).

Step 3: selecting studies

All identified citations from academic databases were compiled and uploaded into Mendeley reference management software (Elsevier, New York, USA), where duplicates were subsequently removed. The studies were then uploaded to Rayyan.ai (Rayyan, Boston, MA, USA) for title and abstract screening. Two reviewers from a group of six independently screened publications based on their titles and abstracts for studies and summaries for reports.

The following inclusion and exclusion criteria were applied both to academic publications and reports from international organizations.

Inclusion criteria

Studies included were those that:

- had been conducted anywhere in the world and involved human participants, including children, adolescents or adults;
- reported on new, expanded or existing social protection measures designed to mitigate the unintended negative consequences of PHSM on the social determinants of health during the COVID-19 pandemic;
- discussed formal social protection policies and programmes implemented by governments;
- addressed the implementation or outcomes of social protection policies and programmes;
- were published or in preprint between March 2020 and August 2022;
- were peer-reviewed academic publications, preprints, working papers or reports from international organizations. We included perspectives, commentaries and other types of studies if they contained data about the effects of social protection programmes or policies;
- used any type of study method, including qualitative, quantitative or mixed; were descriptive or summary reports; also included were studies that used secondary data, including systematic and scoping reviews.

Exclusion criteria

Studies excluded were those that:

- lacked any explicit reference to social protection measures implemented in the context of PHSM during the COVID-19 pandemic;
- focused on social protection but not within the context of the COVID-19 pandemic;
- focused on general financial interventions implemented during the pandemic that were not directed towards individuals or communities (e.g. they provided additional financing to businesses);

- discussed the theoretical potential impacts of social protection programmes or policies or planned programmes that had not been implemented;
- were editorials, letters to the editor, theoretical discussions, modelling of potential impacts or planned programmes that had not been implemented or did not contain data, or both; these were also excluded if they had not been subsequently published as a journal article. Also excluded were newspaper and magazine articles, conference abstracts, podcasts, radio programmes and blogs.

Full-text screening

Following the initial screening of the title and abstract, the full text of potentially relevant studies was retrieved and imported into the Covidence review tool (Melbourne, Australia). Each article was assessed for eligibility independently by two reviewers selected from a group of six. Disagreements between two reviewers were resolved through discussion and consensus. In cases in which agreement was not reached, a third reviewer from the initial group was consulted to resolve the conflict. Reasons for exclusion are detailed in Fig. A1.1.

In addition to the aforementioned process, full-text studies in French, German, Indonesian, Italian, Japanese, Portuguese, Russian, Spanish and Turkish were screened by two independent reviewers proficient in the language who were not part of the core reviewer group. All studies contained sufficient information to make a judgement about inclusion, and there was no need to contact authors for further information.

Fig. A1.1 presents the flow chart of the screening process and information about the final included studies. The search yielded 8841 studies from the WHO COVID-19 Research Database, of which 711 duplicates were removed, 230 records from Google Scholar and 9078 reports from the grey literature. A total of 552 studies from the WHO COVID-19 Research Database and 256 grey literature reports were retrieved for full-text screening. In the end, 316 studies were included in the evidence base for this brief, and 44 studies were included to illustrate the so-called effectiveness of social protection measures implemented in response to the COVID-19 pandemic.

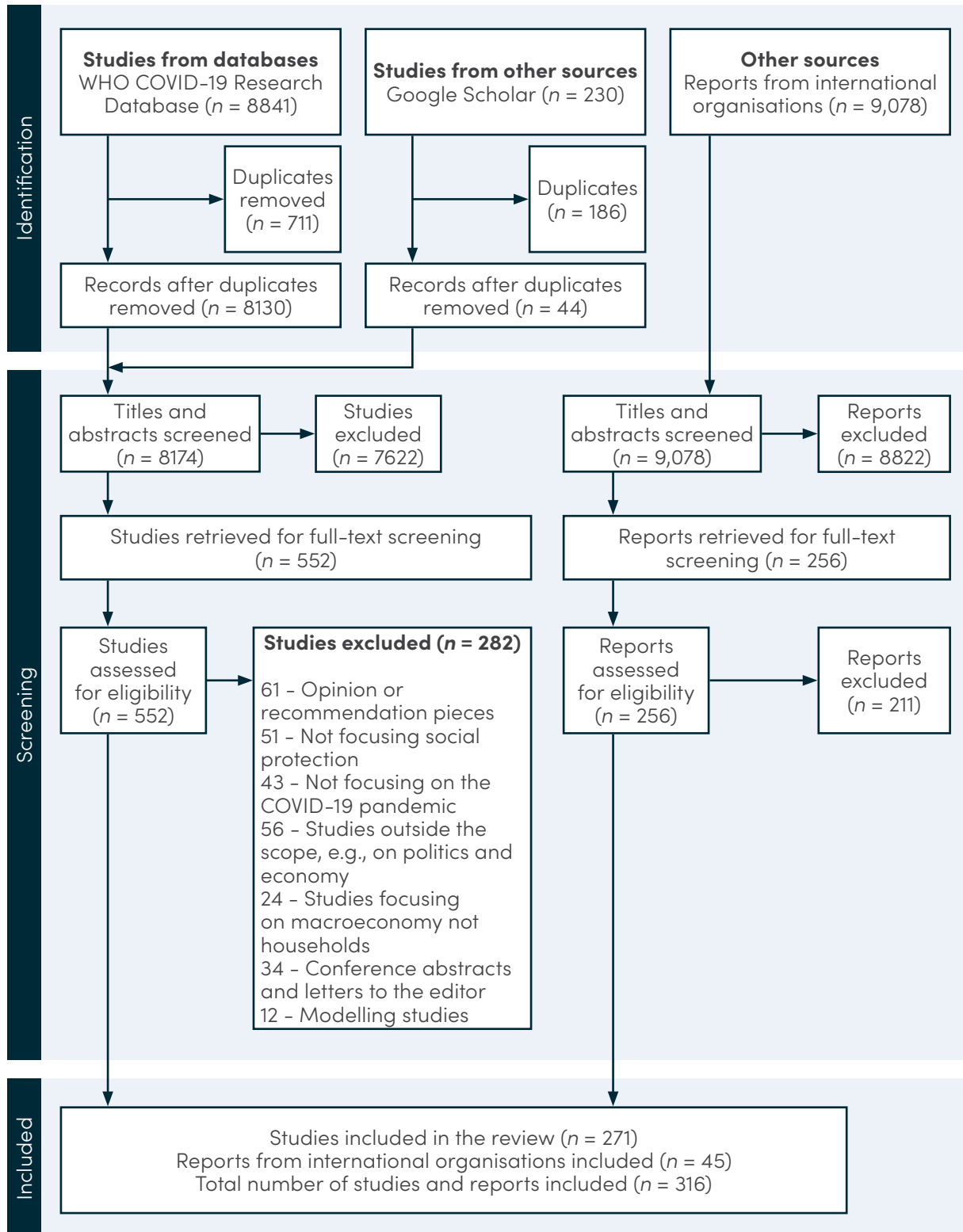
Data were extracted using a tested form; after data extraction and charting, each country included in the studies was mapped according to the World Bank country income categories for 2022–2023 (3). Social protection policies and programmes were further classified by type of scheme, as defined by the ILO (Table 1) (4).

Analysis was performed in three steps to increase consistency. First, a summary was written to describe the key characteristics of the included studies. Second, the results relating to the unintended negative health and socioeconomic consequences of PHSM were analysed. To answer the question about the effectiveness of social protection measures implemented to mitigate the unintended negative consequences of PHSM and the pandemic, only studies providing an estimate of the relationship between the type of social protection policies and programmes and outcomes that compared two groups were considered (i.e. one receiving the intervention and the other one not), including quantitative, qualitative and mixed methods designs.

The studies that were synthesized primarily focus on high-income countries and the gaps in social protection coverage or on low- and middle-income countries with a baseline of low social protection coverage. In-depth studies looking at how more mature welfare states with more generous social protection benefits operated during the pandemic were largely not captured by this review. The intention of gathering information from studies of countries with lower social

protection coverage was to highlight practical examples that could be applicable to countries that are still developing their social protection systems or to contexts that are less well-resourced.

Fig. A1.1. PRISMA (Preferred Reporting Items for Systematic reviews and Meta-Analyses) flow diagram of studies



Eligibility criteria for the assessment of the effectiveness of social protection policies and programmes

A subset of 44 studies was selected. For this purpose, an additional set of eligibility criteria was formulated to include relevant studies that conducted (i) a quantitative analysis, (ii) a qualitative analysis or (iii) used mixed methods.

First, single-country studies that used a quantitative analysis of the impact or association of at least one social protection measure with at least one outcome were selected. This subset comprised purely quantitative studies and mixed methods studies that used a quantitative analysis.

Only the following set of outcomes was extracted and reported from these selected studies: the unintended health and socioeconomic consequences of PHSM and the COVID-19 pandemic, health status, and COVID-19-related variables and behaviours. Only outcomes reported at the individual or household level were included. Additionally, the effects or associations of all investigated governmental social protection policies were included. Reported informal social protection policies were excluded from this analysis. Analyses of policies used or expanded during the COVID-19 pandemic but based on data from before the pandemic were also excluded analysis.

Second, studies utilizing qualitative methods to assess effects on the recipients of a social protection policy were identified. These studies reported data from individual interviews or focus group discussions. Data collected using qualitative methods but analysed quantitatively or in a numerically descriptive manner were also excluded.

Qualitative studies were analysed, synthesized and summarized using manifest thematic content analysis (5), which involved three steps. Initially, four reviewers independently entered line-by-line findings from the qualitative studies and coded them using open coding. Each reviewer created a meaning unit and a code. SA verified these codes and meaning units and created themes, along with a narrative summary of these themes. The analyses were subsequently verified by each of the reviewers to ensure they accurately reflected the original studies.

Studies exploring the mechanisms through which inequities arise as a result of PHSM and assessing how these inequalities impact different social groups were evaluated and categorized as equity studies. Additionally, studies examining the impacts of social protection on these inequalities were also included within this category.

Step 4: charting the data

Key information from the studies that focused on a single country was extracted using the Covidence data extraction tool. This information included the title, year, author (or authors), study location, research question, policy name, policy scale and beneficiaries, policy coverage, type of social protection programme, programme actors and participants. Additionally, details about how the study was conducted were extracted, including study design, sample size, equity impacts focused on and key findings (see [Annex 2](#) for an example of the extraction table). The lead reviewers validated the extraction process.

Information from studies or other literature that reported on multiple countries was manually extracted into an Excel form containing the same extraction categories as studies focusing on a single country because the extraction tool did not allow for multiple entries for the same criterion.

Each study assessing multiple countries or social protection policies and programmes was separated into different lines, with a new unique identifier for each country within the report.

The level and detail of data between reports, and single- and multi-country studies differed and were not always directly comparable. Data from multicountry studies did not primarily assess the impact of social protection policies and programmes.

Charting the data for the effectiveness assessment

The following characteristics were systematically extracted for these studies: author (or authors), country, intervention-related information (i.e. name, description, type of scheme, type of benefit, new/existing/adapted policy, targeted contingency), data and methods (i.e. population, time period, sample size, study design and data analysis methods, exposure, outcome, confounders), and the results for each combination of policy and outcome investigated.

Similarly, for the qualitative studies, a new extraction sheet was also used to obtain the following characteristics: author (or authors), year, intervention-related information (i.e. name, description, type of scheme, new/existing/adapted policy, type of benefit, targeted contingency) and results related to the type of social protection policy and programme.

For equity studies, we extracted the following information: author (or authors), year, country, intervention-related information (i.e. name, description, type of scheme, type of benefit, new/existing/adapted policy, targeted contingency), data and methods (i.e. population, time period, sample size, study design and data analysis methods, exposure, outcome), and the results of the effects of social protection policies and programmes on different populations.

Step 5: collating, summarizing and reporting the results

After data extraction and charting, each country included in the studies was mapped according to the World Bank country income categories for 2022–2023 (3). This mapping allowed for a clearer understanding of how social protection policies and programmes are distributed across different country income groups. We further categorized the social protection policies and programmes by type of scheme; this categorization also provided insights into the coverage of these policies and their effectiveness in addressing social inequalities.

The analysis was conducted in three steps, aiming to increase consistency. First, a summary was written. Second, the results pertaining to key outcomes were analysed, guided by a conceptual framework for the consequences of PHSM.

Findings are presented based on the types of social protection policies and programmes, as classified and defined by the ILO (Table 1) (4).

Table 1. Types of social protection policies and programmes included in this scoping review

Type of social protection policy and programme (type of scheme)	Example
In cash (family maintenance)	Family benefits, cash transfers
In cash (unemployment)	Short-term work benefits, income support benefits
In cash (sickness and health care)	Occupational injury benefit, paid sick leave
In cash (education)	National scholarship, tuition fee assistance
In cash (disability)	Disability benefits
In cash (housing)	Moratorium (e.g. on paying taxes and mortgages)
In kind (goods)	Emergency food, Supplemental Nutrition Assistance Program (USA)
In kind (services)	Unemployment insurance, job retention scheme
In kind (vouchers)	Grocery vouchers, childcare vouchers
Utility or financial fee waiver	Reduction in rent
Moratorium on rent payment	Rent deferral, rent moratorium
General labour and fiscal measures	Price controls

Collating, summarizing and reporting the results for the “effectiveness” assessment

Results from (i) quantitative studies, (ii) qualitative studies and (iii) equity studies are presented.

Since this scoping review is also interested in the effectiveness of social protection policies and programmes in reducing the unintended negative consequences of PHSM implementation, studies comparing two groups (i.e. one receiving a social protection benefit and one not) were included in the analysis. However, the term “effectiveness” needs to be used with caution as not all study designs are suited to drawing conclusions about true cause–effect relationships. Instead, some provided information about associations between an intervention and outcomes. To facilitate the interpretation of the robustness and meaningfulness of the findings, the evidence is presented using a pragmatic interpretation approach based on the study’s design:

- natural experiments and quasi-experimental studies – that is, studies that exploit natural sources of variation in an intervention in order to investigate the effect of the policy on the outcome (6, 7); these methods are the most suited to evaluating social policy because they can consider the complexity and context of social interventions;
- experimental studies – that is, studies in which an intervention (i.e. the social protection policy or programme) was randomized to create an intervention and a control group, usually in a controlled setting; while this design produces stronger evidence about the efficacy of interventions, it is restricted in its applicability to a smaller set of circumstances, contexts and social protection interventions. Most social systems, including health systems, advance historically along with human rights norms and criteria to encompass large proportions of the population. Randomly assigning individuals to receive a benefit or be excluded from it thus brings up ethical and human rights challenges and poses the risk of drawing biased conclusions about effectiveness because the study does not consider the complexity and influence of the real-life context;

- longitudinal studies – that is, studies based on data collected at several points in time from the same participants, and usually including pre- and post-intervention periods. These designs can usually adjust for context by tracking particular variables over time;
- cross-sectional studies – that is, studies based on data collected at one point in time, usually comparing one group receiving the intervention with a group that does not receive it.

The first two types of studies attempt to control for potential confounders in their design, whereas the latter two types control for confounders by using statistical adjustment. Hence, quasi-experimental studies are considered more robust for causal inference than longitudinal or cross-sectional studies. Additional important aspects of causality and risk of bias assessments – such as sample selection and data collection mechanisms, measurement errors or loss to follow up – are not reflected in this categorization.

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Annex 2. Search string

Social assistance	"social protection"~3 OR "social assistance"~3 OR "social safety" OR ti:"social security" OR "socio-economic measures"~3 OR "socio-economic measure"~3 OR "economic measures"~3 OR "economic measure"~3 OR "economic support"~3 OR "economic supports"~3 OR "economic assistance"~3 OR "social transfer"~3 OR "social transfers"~3 OR "cash transfers" OR "cash transfer" OR "cash benefit"~3 OR "cash benefits"~3 OR "social insurance"~3 OR "social insurances"~5 OR ti:("Social policy"~5 OR "social policies"~5 OR "economic policies"~5 OR "economic policy"~5 OR "policy reactions"~3 OR "policy reaction"~3 OR ("policy response" OR "policy responses") AND (Social* OR economic* OR financ*))
Social transfers	OR "social transfer"~3 OR "social transfers"~3
Cash	OR "monetary intervention" OR "financial support" OR "financial supports" OR "economic transfer" OR "economic transfers" OR "monetary transfer" OR "monetary transfers" OR "financial transfer" OR "financial transfers" OR "cash incentive" OR "cash incentives" OR "economic incentive" OR "economic incentives" OR "monetary incentive" OR "monetary incentives" OR "financial incentive" OR "financial incentives" OR "cash intervention" OR "cash interventions" OR "economic intervention" OR "economic interventions" OR "monetary intervention" OR "monetary interventions" OR "financial intervention" OR "financial interventions"
Vouchers	OR Voucher*
In-kind (incl school feeding)	OR "in kind"
Public works	
Cash for work	OR "public works"
Food for work	OR "public works" OR "in kind"
Vouchers for work	OR "public works" OR "in kind" OR Voucher*
Fee waivers	OR "in kind" OR "fee waiver" OR "fee waivers"
Basic health	
Basic education	
Subsidies	OR subsidies OR subsidy
fuel	
food	OR "food subsidy" OR "food subsidies" OR "food support" OR "food insecurity" OR ti:"food security" OR "food sufficiency" OR "food insufficiency" OR "food assistance"
Social care	
Family support services	
Home based services	

Housing	"housing support"~3 OR "housing policy" OR "housing policies" OR eviction* OR "housing insecurity" OR "housing security" OR "rental assistance" OR "rental support" OR "rental protection" OR "tenant protection"
Social insurance	
Insurance for: unemployment	OR "job security"~3 OR "work security"~3 OR "employment security"~3 OR "job protection"~3 OR "job protect"~3 OR "employment protection"~3 OR "employment protect"~3 OR "income security"~3 OR "income protection"~3 OR "income protect"~3 OR "income support"~3 OR "income supports" OR "wage protect"~3 OR "wage protection"~3 OR "job support" OR "employment support" OR "employment protecting"~3 OR "unemployment benefits" OR "unemployment benefit" OR "unemployment protection" OR "unemployment support" OR "unemployment assistance" OR "financial security"~3 OR "livelihood security"~3 OR "paycheck Protection"
maternity, paternity	
disability	OR "sickness benefits" OR "sickness benefit" OR "sick leave" OR "sickness leave" OR "social insurance"~3 OR "social insurances"~5
work accidents	OR "sickness benefits" OR "sickness benefit" OR "sick leave" OR "sickness leave"
Old age pension	OR "financial security"~3 OR "livelihood security"~3 OR "social insurance"~3 OR "social insurances"~5
Crop/livestock insurance	OR "financial security"~3 OR "livelihood security"~3
Labour market policies and programmes	
Active labour market policies	
Work sharing	OR "job support" OR "employment support" OR "paycheck Protection"
Training	
Job-search services	OR "job support" OR "employment support"
Passive labour policies and programmes	
Maternity benefit	OR "job protection"~3 OR "job protect"~3
Injury compensation and sickness benefits for those in work	OR "sickness benefits" OR "sickness benefit" OR "sick leave" OR "sickness leave"
Changes in legislation	OR "employment guarantee"~3 OR "job protection"~3 OR "job protect"~3
minimum wage	
safe working conditions	OR "job support"

Annex 3. Studies included in the “effectiveness appraisal”

Study ID (first author, publication year, geographical setting)	Study design	Name and description of the social protection measure	Type of scheme	Type of social protection measure and age of scheme	Targeted contingency and population included	Description of intervention exposure	Identified confounders	Assessed outcome variables	Results
Food insecurity > Social assistance - in-cash benefits > High-income countries									
Jacob, 2022, USA	experimental study	NA unconditional, one-time cash transfer to low-income individuals	<i>social assistance - means-tested scheme</i>	<i>in-cash (general transfer)</i> new	<i>family maintenance (income)</i> sample of families receiving SNAP benefits, from ZIP codes with poverty rates of at least 35%	receipt of one-time cash transfer	Spanish language, age, state, race/ethnicity, sex, education, households size, total number of kids, marital and living status, SNAP benefits, missing benefits, zip code covariates and state fixed effects	food insecurity	no effect
Bryant, 2022, USA	quasi-experiment/natural experiment study	Supplemental Nutrition Assistance Program (SNAP) purpose-specific cash-transfers (food)	<i>social assistance - means-tested scheme</i>	<i>in-cash (food)</i> adapted	<i>family maintenance (food insecurity)</i> general population	15 % increase in SNAP benefits starting in January 2020 for all beneficiaries	NA	food insufficiency	significant reduction of instances of food insufficiency and visits to local pantries
Lee, 2022, USA	longitudinal analysis	Supplemental Nutrition Assistance Program (SNAP) purpose-specific cash-transfers (food)	<i>social assistance - means-tested scheme</i>	<i>in-cash (food)</i> adapted	<i>family maintenance (food insecurity)</i> individuals receiving the two mentioned social security programs before and after the pandemic	participation in either one of the two programs	NA	food insecurity	SNAP was not associated with food insecurity
Clay, 2021, USA	cross-sectional analysis	Supplemental Nutrition Assistance Program (SNAP) purpose-specific cash-transfers (food)	<i>social assistance - means-tested scheme</i>	<i>in-cash (food)</i> adapted	<i>family maintenance (food insecurity)</i> oversampling of groups with increased food insecurity	participation in any food assistance program (the ones mentioned or other programs)	Race/ethnicity, income, education, age	food insecurity	use of SNAP was associated with a higher likelihood of food insecurity

Study ID (first author, publication year, geographical setting)	Study design	Name and description of the social protection measure	Type of scheme	Type of social protection measure and age of scheme	Targeted contingency and population included	Description of intervention exposure	Identified confounders	Assessed outcome variables	Results
Kim, 2021, USA	cross-sectional analysis	Supplemental Nutrition Assistance Program (SNAP) purpose-specific cash-transfers (food)	<i>social assistance - means-tested scheme</i>	<i>in-cash (food)</i> adapted	<i>family maintenance (food insecurity)</i> individuals with income disruption in their households, adult housing renters	financial hardship, controlling for receipt of social assistance/ insurance	age, gender, race/ethnicity, marital status, educational attainment, 2019 household income, use of federal stimulus assistance, household size, presence of children in the household, overall health status, state of residence, survey period	food insufficiency	SNAP participation was not related to a reduction in food insufficiency (i.e. benefits did not offset the insufficiency likely caused by financial hardship)
Lu, 2022, USA	cross-sectional analysis	Pandemic - EBT (Electronic Benefit Transfer) purpose-specific cash-transfers (food) for families in need with children	<i>social assistance - means-tested scheme</i>	<i>in-cash (food)</i> new	<i>family maintenance (food insecurity)</i> voluntary participants of a local program (Healthy Helping Fruit and Vegetable Program; eligibility: households that received SNAP benefits and that reported being negatively impacted by Covid-19)	enrolment in different food assistance programs [mixed - check]	number of food assistance programs the respondent was enrolled in, number of household members for different age categories, income, education, rural/urban county, ethnicity	food security	the probability of food security rates among HH participants was not associated with participation in other food assistance programs
		Emergency SNAP allotment purpose-specific cash-transfers (food) for families in need	<i>social assistance - means-tested scheme</i>	<i>in-cash (food)</i> adapted	<i>family maintenance (food insecurity)</i> voluntary participants of a local program (Healthy Helping Fruit and Vegetable Program; eligibility: households that received SNAP benefits and that reported being negatively impacted by Covid-19)	participation in different food assistance programs [mixed - check]			
Ogundari, 2022, USA	cross-sectional analysis	Supplemental Nutrition Assistance Program (SNAP) purpose-specific cash-transfers (food)	<i>social assistance - means-tested scheme</i>	<i>in-cash (food)</i> adapted	<i>family maintenance (food insecurity)</i> general population	participation in SNAP, receipt of UI or participation to charitable food assistance	income levels, marital status, gender, race/ethnicity, educational levels, age and household size, region, time	food sufficiency	SNAP participation is associated with higher levels of food sufficiency

Study ID (first author, publication year, geographical setting)	Study design	Name and description of the social protection measure	Type of scheme	Type of social protection measure and age of scheme	Targeted contingency and population included	Description of intervention exposure	Identified confounders	Assessed outcome variables	Results
Singleton, 2022, USA	cross-sectional analysis	Supplemental Nutrition Assistance Program (SNAP) purpose-specific cash-transfers (food)	<i>social assistance - means-tested scheme</i>	<i>in-cash (food)</i> adapted	<i>family maintenance (food insecurity)</i> sample of Black and Latino adults in Illinois	change in employment type (lost job entirely, employed, but paid hours reduced, employed, but anticipate job loss, no change) - controlling for SNAP benefits receipt	socio-demographics: age, race/ethnicity, sex, educational level, pre-pandemic annual income, spouse/partner status, children status.	food security	All changes in employment were significantly associated with increased odds of low food security after adjusting for socio-demographics. SNAP participants who lost their job had higher odds of LFS (OR: 4.69; 95% CI: 2.69–8.17) compared to non-participants who lost their job (OR: 2.97; 95% CI: 1.95–4.52).
Spence, 2022, USA	cross-sectional analysis	Supplemental Nutrition Assistance Program (SNAP) purpose-specific cash-transfers (food)	<i>social assistance - means-tested scheme</i>	<i>in-cash (food)</i> adapted	<i>family maintenance (food insecurity)</i> general population	participating in at least one/all programs [mixed - check]	matching variables: age (under 35), children in household, negative job change, education (at least a bachelor's degree), household size (4 or more individuals), and rurality.	food insecurity	Those using any federal nutrition assistance programs are more likely to be food insecure compared to those who are not using any program.
Food insecurity > Social assistance - in-cash benefits > Middle-income countries									
Londono-Velez, 2022, Colombia	experimental study	NA unconditional cash transfers (actually VAT compensation of a fixed amount for poor households)	<i>social assistance - means-tested scheme</i>	in-cash (general transfer)	family maintenance (income)	receipt of unconditional cash transfer	municipality fixed effects as well as baseline controls for sex, age, victim status, civil status, employment sector, living in an urban area, being a recipient of Colombia Mayor, and SISBEN score.	food access	cash transfers increased the probability of buying food in the previous week by 4.4 percentage points (6.1%)
								food security	no effect on food security (limited meals, 0 meals/day, ate at a friend's or relative's, begged for food on the street)

Study ID (first author, publication year, geographical setting)	Study design	Name and description of the social protection measure	Type of scheme	Type of social protection measure and age of scheme	Targeted contingency and population included	Description of intervention exposure	Identified confounders	Assessed outcome variables	Results
Kumar, 2022, India	quasi-experiment/natural experiment study	PM-GKY package (<i>Pradhan Mantri Garib Kalyan Yojana</i>)	social assistance - categorical	<i>in-cash (general transfer)</i>	<i>family maintenance (income)</i> rural households	receipt of PM-GKY benefits [mixed]	age, household size, education, scheduled caste, scheduled tribe, general caste, land size, nonfarm income, have KCC, migrant member, member > 60 age, block fixed effects	food insecurity	receipt of PM-GKY benefits decreases the prevalence of moderate and severe food insecurity
		cash-transfers (for farmers - PM-KISAN)		new (provided via existing schemes)					
		PM-GKY package (<i>Pradhan Mantri Garib Kalyan Yojana</i>)	social assistance - categorical	<i>in-cash (general transfer)</i>	<i>family maintenance (income)</i> rural households				
		cash-transfers (for women - PM-JDI)		new (provided via existing schemes)					
Makkar, 2022, India	quasi-experiment/natural experiment study	NA cash-transfer	social assistance - categorical	<i>in-cash (general transfer)</i> new	<i>family maintenance (income)</i> households involved in the production of nutrient-dense foods, landholding households, landless households	receipt of cash-transfer	land owned, household size, education, age, employment category, expenditures, PDS beneficiary	food insecurity	Individuals who received the cash transfer were less likely to become food insecure during the pandemic than individuals who did not receive the benefit.

Study ID (first author, publication year, geographical setting)	Study design	Name and description of the social protection measure	Type of scheme	Type of social protection measure and age of scheme	Targeted contingency and population included	Description of intervention exposure	Identified confounders	Assessed outcome variables	Results
Strupat, 2022b, Kenya	quasi-experiment/ natural experiment study	National Safety net Programme (NSNP) cash-transfer to older people, people with disabilities, orphans and vulnerable children (expanded via lump-sum payments and increasing level of support)	<i>social assistance - categorical</i>	<i>in-cash (general transfer)</i> adapted	<i>family maintenance (income)</i> households that operate in the informal sector economy	receiving social assistance (either one of the two policies mentioned)	age and sex of the respondent, education level of the respondent, marital status of the respondent, chronic illness and disability in the household, household size, gender of the household head, the household's share of elderly and children, and coverage from other social protection measures, country dummies	prevalence of lived poverty (how often individuals go without food)	social assistance was related with a lower probability of reporting lived poverty (food scarcity)
		Hunger Safety Net Programme (HSNP) cash transfer for vulnerable households (expanded via lump-sum payments and increasing level of support)	<i>social assistance - categorical</i>	<i>in-cash (general transfer)</i> adapted	<i>family maintenance (income)</i> households that operate in the informal sector economy				
Ayo-Lawal, 2022, Nigeria	cross-sectional analysis	Covid-19 Fiscal Stimulus national cash transfer program (increasing number of beneficiaries and increasing benefits)	<i>social assistance - means-tested scheme</i>	<i>in-cash (general transfer)</i> adapted	<i>family maintenance (income)</i> general population	receiving any type of social assistance [mixed]	household-level variables, including zones in which households are located, type of household, households' metropolitan status, and age of household head	food insecurity	households that benefitted from social assistance were less likely to experience food insecurity (not significant)
Curi-Quinto, 2021, Peru	cross-sectional analysis	"Bonos" one-off cash-transfer targeting 70% of households	<i>social assistance - categorical</i>	<i>in-cash (general transfer)</i> new	<i>family maintenance (income)</i> general population (from 18 to 27 years old) excluding the 5% wealthiest	receiving Bonos, receiving any other pre-existing social assistance program [mixed - check]	area of residence, region of residence, wealth index, middle tercile, household size, five members, presence of child under 5 years, mother education level, education, ethnicity, type of cohort, self-reported changes due to Covid-19, decreased household income due to Covid-19	food insecurity	there was no association between receipt of government support and food insecurity
		Juntos conditional cash transfers for poor families in rural areas	<i>social assistance - categorical</i>	<i>in-cash (general transfer)</i> existing	<i>family maintenance (income)</i> general population (from 18 to 27 years old) excluding the 5% wealthiest				

Study ID (first author, publication year, geographical setting)	Study design	Name and description of the social protection measure	Type of scheme	Type of social protection measure and age of scheme	Targeted contingency and population included	Description of intervention exposure	Identified confounders	Assessed outcome variables	Results	
Das, 2021, India	cross-sectional analysis	PM-GKY package (Pradhan Mantri Garib Kalyan Yojana) - Government of India	social assistance - categorical	in-cash (general transfer)	family maintenance (income)	total amount of benefit from welfare schemes [mixed - check]	family size, daily wage before lockdown	number of meals consumed during lockdown	no association	
		one-time cash-transfers (for farmers - PM-KISAN)		new (provided via existing schemes)	households in the slum areas of north-west Delhi					
		PM-GKY package (Pradhan Mantri Garib Kalyan Yojana) - Government of India	social assistance - categorical	in-cash (general transfer)	family maintenance (income)					households in the slum areas of north-west Delhi
		monthly cash-transfers (for women - PM-JDI)		new (provided via existing schemes)						
		PM-GKY package (Pradhan Mantri Garib Kalyan Yojana) - Government of India	social assistance - categorical	in-cash (general transfer)	family maintenance (income)					households in the slum areas of north-west Delhi
one-time cash-transfer (pensioners, handicapped, widows)		new (provided via existing schemes)								
Programs of Government of Delhi	social assistance - categorical	in-cash (general transfer)	family maintenance (income)	households in the slum areas of north-west Delhi						
cash-transfers (transport service providers)		new								
Programs of Government of Delhi	social assistance - categorical	in-cash (general transfer)	family maintenance (income)							
cash-transfers (construction workers)		new								

Study ID (first author, publication year, geographical setting)	Study design	Name and description of the social protection measure	Type of scheme	Type of social protection measure and age of scheme	Targeted contingency and population included	Description of intervention exposure	Identified confounders	Assessed outcome variables	Results
Gelo, 2022, South Africa	cross-sectional analysis	NA	<i>social assistance - categorical</i>	<i>in-cash (general transfer)</i>	general population (sample of adults who were employed before the first month of lockdown)	total amount of money received via either one of the two measures mentioned [mixed]	sex, rural, urban, race, household size, education, age, number of kids, per capita income	child hunger	in case of job loss, receipt of child support grant is related with a lower likelihood of reporting child hunger
		child support (inferred: cash transfer)		existing				household hunger	in case of job loss, receipt of child support grant is related with a lower likelihood of reporting household hunger
Santana, 2022, Brazil	cross-sectional analysis	<i>Mais Infancia card</i>	<i>social assistance - means-tested scheme</i>	<i>in-cash (general transfer)</i>	families in situations of social vulnerability in the state of Ceará	having received one of the mentioned social policies	NA	food insecurity	Mais Infancia card was associated with increased food insecurity
		monthly cash transfers to families in extreme social vulnerability		existing					receipt of emergency aid cash transfer was not associated with food insecurity
		NA	<i>social assistance - categorical</i>	<i>in-cash (general transfer)</i>	families in situations of social vulnerability in the state of Ceará				
		emergency aid cash transfer (for self-employed, informal workers or family in social vulnerability situations)		new					

Study ID (first author, publication year, geographical setting)	Study design	Name and description of the social protection measure	Type of scheme	Type of social protection measure and age of scheme	Targeted contingency and population included	Description of intervention exposure	Identified confounders	Assessed outcome variables	Results
Santos, 2022, Argentina	cross-sectional analysis	Universal Child Allowance (AUH) national cash transfer	<i>social assistance - means-tested scheme</i>	<i>in-cash (general transfer)</i> existing	<i>family maintenance (income)</i> households that requested some kind of assistance	combinations of the programs mentioned in column D	household size, presence of under-18, access to internet, maximum educational level of household, at least one member is working, borrowing	food insecurity	receipt of AUH and/or IFE was related to lower probability of under 18 members reducing meals portions
		Emergency Family Income (IFE) exceptional cash transfer during lockdown	<i>social assistance - categorical</i>	<i>in-cash (general transfer)</i> new	<i>family maintenance (income)</i> households that requested some kind of assistance				
		Progresar national scholarship for students from disadvantaged households	<i>social assistance - means-tested scheme</i>	<i>in-cash (education)</i> existing	<i>education??</i> households that requested some kind of assistance				
		Complementary Social Salary (CSS) and We Make a Future (HF) conditional cash transfer for participants of national employment/social development program	<i>social assistance - categorical</i>	<i>in-cash (general transfer)</i> existing	<i>family maintenance (income)</i> households that requested some kind of assistance				
		Municipal cash transfer (Golden Card) cash-transfer for households with specific needs	<i>social assistance - categorical</i>	<i>in-cash (general transfer)</i> existing	<i>family maintenance (income)</i> households that requested some kind of assistance				
Shahzad, 2021, Pakistan	cross-sectional analysis	NA financial assistance (loosely defined, any type of financial assistance from government or any institutions)	<i>social assistance - categorical</i>	<i>in-cash (general transfer)</i> unclear	<i>unclear</i> general population	receiving financial aid	age, education, location, family size, gender, marital status, quarantine, health insurance, savings, community sizes, profession category, income	food insecurity	receiving financial aid was related with lower food insecurity

Study ID (first author, publication year, geographical setting)	Study design	Name and description of the social protection measure	Type of scheme	Type of social protection measure and age of scheme	Targeted contingency and population included	Description of intervention exposure	Identified confounders	Assessed outcome variables	Results
Food insecurity > Social assistance - in-cash benefits > Low-income countries									
Stein, 2022, Uganda	experimental study	NA one-off unconditional cash transfer for refugees	<i>social assistance - categorical</i>	<i>in-cash (general transfer)</i> new	<i>family maintenance (income)</i> households of a refugee settlement in Uganda	intended receipt of cash transfer (experimental variation in timing of the cash transfer due to randomized allocation by the study team)	sex of households head, household size, time in the settlement and ethnic group, baseline value of outcome	food security	receiving the cash transfer was related with higher food security
Abay, 2021, Ethiopia	quasi-experiment/natural experiment study	Productive Safety Net Program (PSNP) unconditional cash transfers or in-kind (food) transfers for households whose main income earners are elder or disabled	<i>social assistance - categorical</i>	<i>in-kind (food) and in-cash (general transfer)</i> existing	<i>family maintenance (food insecurity)</i> poor households with at least one child with less than 24 months of age	participation in the PSNP [mixed]	time invariant and observable time-varying characteristics	food insecurity	participation in the PSNP offsets (almost completely) the parallel increase in food insecurity due to the pandemic
Mnyanga, 2022, Malawi	cross-sectional analysis	Covid-19 Urban Cash Intervention cash transfer (inferred - no other info) Social Cash Transfers (SCTs) cash-transfers NA other cash transfers	<i>social assistance - means-tested scheme</i> <i>social assistance - means-tested scheme</i> <i>social assistance - means-tested scheme</i>	in-cash (general transfer) new in-cash (general transfer) existing in-cash (general transfer) existing	<i>family maintenance (income)</i> general population <i>family maintenance (food)</i> general population <i>family maintenance (income)</i> general population	receiving any kind of social benefit [mixed]	household demographic characteristics, household head characteristics (age, sex, education level, sector of employment, marital status), wealth category of the household, place of residence, region, economic shocks, health shocks and socio-political shocks	reducing food consumption	households that received social assistance were less likely to reduce food consumption

Study ID (first author, publication year, geographical setting)	Study design	Name and description of the social protection measure	Type of scheme	Type of social protection measure and age of scheme	Targeted contingency and population included	Description of intervention exposure	Identified confounders	Assessed outcome variables	Results
Food insecurity > Social assistance - in-kind benefits > High-income countries									
Anderson, 2022, USA	quasi-experiment/natural experiment study	Meals-to-you program (both emergency MTY and summer MTY) in-kind transfer (food boxes delivered to households)	<i>social assistance - categorical</i>	<i>in-kind (food)</i> new/adapted	<i>family maintenance (food insecurity)</i> eligible population	number of food boxes received via the MTY program	race/ethnicity, household size, income as a percentage of the poverty line, program, damaged boxes, job losses, reduced hours, reduced wages	food insecurity	households receiving more boxes had larger declines in food insecurity
Lee, 2022, USA	longitudinal analysis	Older Americans Act (OAA) includes home delivered meals (in-kind (food) transfers), caregiver services	<i>social assistance - means-tested scheme</i>	<i>in-kind (food) & in-kind (service)</i> existing/adapted	<i>family maintenance (food insecurity)/disability</i> individuals receiving the two mentioned social security programs before and after the pandemic	participation in either one of the two programs		food insecurity	Participation in community meals was associated with increased food insecurity. Home-delivered meals and other OAA services were associated with a decrease in food insecurity
Abrams, 2020, USA	cross-sectional analysis	Special Supplemental Nutrition Assistance Program for Women, Infants and Children (WIC) in-kind (food) transfers, referrals to healthcare and information on healthy eating	<i>social assistance - means-tested scheme</i>	<i>in-kind (food) & in-kind (service)</i> existing	<i>family maintenance (food insecurity)</i> families during paediatric visits	participation to WIC or SNAP	sex, ethnicity	food insecurity	WIC participation was associated with higher food insecurity (both means testing and regression)

Study ID (first author, publication year, geographical setting)	Study design	Name and description of the social protection measure	Type of scheme	Type of social protection measure and age of scheme	Targeted contingency and population included	Description of intervention exposure	Identified confounders	Assessed outcome variables	Results
Clay, 2021, USA	cross-sectional analysis	Special Supplemental Nutrition Assistance Program for Women, Infants and Children (WIC)	<i>social assistance - means-tested scheme</i>	<i>in-kind (food) & in-kind (service)</i> existing	<i>family maintenance (food insecurity)</i> oversampling of groups with increased food insecurity	participation in any food assistance program (the ones mentioned or other programs)	Race/ethnicity, income, education, age	food insecurity	food assistance programs were not associated with food insecurity
		School meal programs in-kind (food) transfers (free school meals)	<i>social assistance - categorical</i>	<i>in-kind (food)</i> existing	<i>family maintenance (food insecurity)</i> oversampling of groups with increased food insecurity				
		Commodity Supplemental Food program in-kind (food) transfers (free school meals)	<i>social assistance - categorical</i>	<i>in-kind (food)</i> existing	<i>family maintenance (food insecurity)</i> oversampling of groups with increased food insecurity				

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Lu, 2022, USA	cross-sectional analysis	School meals and summer feeding program in-kind (food) transfers (free school meals)	<i>social assistance - means-tested scheme</i>	<i>in-kind (food)</i> existing	<i>family maintenance (food insecurity)</i> voluntary participants of a local program (Healthy Helping Fruit and Vegetable Program; eligibility: households that received SNAP benefits and that reported being negatively impacted by Covid-19)	enrollment in different food assistance programs [mixed - check]	number of food assistance programs the respondent was enrolled in, number of household members for different age categories, income, education, rural/urban county, ethnicity	food security	the probability of food security rates among HH participants was not associated with participation in other food assistance programs
		Emergency Meals to You in-kind transfers (food) for students	<i>social assistance - categorical</i>	<i>in-kind (food)</i> new	<i>family maintenance (food insecurity)</i> voluntary participants of a local program (Healthy Helping Fruit and Vegetable Program; eligibility: households that received SNAP benefits and that reported being negatively impacted by Covid-19)				
		USDA's Farmers to Families Food Boxes in-kind transfers (food)	<i>social assistance - categorical</i>	<i>in-kind (food)</i> new	<i>family maintenance (food insecurity)</i> voluntary participants of a local program (Healthy Helping Fruit and Vegetable Program; eligibility: households that received SNAP benefits and that reported being negatively impacted by Covid-19)				
		Special Supplemental Nutrition Assistance Program for Women, Infants and Children (WIC) in-kind (food) transfers, referrals to healthcare and information on healthy eating	<i>social assistance - means-tested scheme</i>	<i>in-kind (food) & in-kind (service)</i> existing	<i>family maintenance (food insecurity)</i> voluntary participants of a local program (Healthy Helping Fruit and Vegetable Program; eligibility: households that received SNAP benefits and that reported being negatively impacted by Covid-19)				

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Parnham, 2020, UK	cross-sectional analysis	NA free school meals (vouchers or in-kind transfers)	<i>social assistance - means-tested scheme</i>	<i>in-kind (food)</i>	<i>family maintenance (food)</i>	having received a voucher or a free school meal at school	school phase, ethnicity of guardian, household income	food insecurity (using a food bank in the last 4 weeks)	those who accessed their FSM entitlement were more likely to use a food bank
				adapted	children that were eligible to receive the free school meals	food insecurity (reporting a household member feeling hungry but being unable to eat in the past week)		receiving vouchers or free school meals is not associated with reporting a household member feeling hungry but being unable to eat	
Spence, 2022, USA	cross-sectional analysis	Special Supplemental Nutrition Assistance Program for Women, Infants and Children (WIC)	<i>social assistance - means-tested scheme</i>	<i>in-kind (food) & in-kind (service)</i>	<i>family maintenance (food insecurity)</i>	participating in at least one/all programs [mixed - check]	matching variables: age (under 35), children in household, negative job change, education (at least a bachelor's degree), household size (4 or more individuals), and rurality.	food insecurity [mixed - check]	those using any federal nutrition assistance programs are more likely to be food insecure compared to those who are not using any program
		in-kind (food) transfers, referrals to healthcare and information on healthy eating		existing					
		school meal programs		<i>social assistance - means-tested scheme</i>	<i>in-kind (food)</i>	<i>family maintenance (food insecurity)</i>			
		in-kind (food) transfers (free school meals)		existing	general population				
Food insecurity > Social assistance - in-kind benefits > Middle-income countries									
Kumar, 2022, India	quasi-experiment/natural experiment study	PM-GKY package (Pradhan Mantri Garib Kalyan Yojana)	<i>social assistance - categorical</i>	<i>in-kind (food)</i>	<i>family maintenance (food insecurity)</i>	receipt of PM-GKY benefits [mixed]	age, household size, education, scheduled caste, scheduled tribe, general caste, land size, nonfarm income, have KCC, migrant member, member > 60 age, block fixed effects	food insecurity	receipt of PM-GKY benefits decreases the prevalence of moderate and severe food insecurity
		in-kind support (food-PM-AVY)		new (provided via existing schemes)	rural households				
		PM-GKY package (Pradhan Mantri Garib Kalyan Yojana)		<i>in-kind (cooking gas)</i>					
		monthly in-kind benefits (cooking gas - PM-UY)		new (provided via existing schemes)					

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Ayo-Lawal, 2022, Nigeria	cross-sectional analysis	Covid-19 Fiscal Stimulus in-kind food transfers to low income families	<i>social assistance - means-tested scheme</i>	<i>in-kind (food)</i> new	<i>family maintenance (food insecurity)</i> general population	receiving any type of social assistance [mixed]	household-level variables, including zones in which households are located, type of household, households' metropolitan status, and age of household head	food insecurity	households that benefitted from social assistance were less likely to experience food insecurity (not significant)
Curi-Quinto, 2021, Peru	cross-sectional analysis	Glass of Milk, Community Kitchen, Food for Work food aid programs	<i>social assistance - categorical</i>	<i>in-kind (food)</i> existing	<i>family maintenance (food insecurity)</i> general population (from 18 to 27 years old) excluding the 5% wealthiest	receiving Bonos, receiving any other pre-existing social assistance program [mixed]	area of residence, region of residence, wealth index, middle tercile, household size, five members, presence of child under 5 years, mother education level, education, ethnicity, type of cohort, self-reported changes due to Covid-19, decreased household income due to Covid-19	food insecurity	there was no association between receipt of government support and food insecurity
		NA other complementary meal program delivered at primary health care centers	<i>social assistance - categorical</i>	<i>in-kind (food)</i> existing	<i>family maintenance (food insecurity)</i> general population (from 18 to 27 years old) excluding the 5% wealthiest				
Das, 2021, India	cross-sectional analysis	PM-GKY package (Pradhan Mantri Garib Kalyan Yojana) - Government of India monthly in-kind support (food-PM-AAY)	<i>social assistance - categorical</i>	<i>in-kind (food)</i> new (provided via existing schemes)	<i>family maintenance (food insecurity)</i> households in the slum areas of north-west Delhi	total amount of benefit from welfare schemes [mixed - check]	family size, daily wage before lockdown	number of meals consumed during lockdown	no association
		PM-GKY package (Pradhan Mantri Garib Kalyan Yojana) - Government of India monthly in-kind benefits (cooking gas - PM-UY)	<i>social assistance - categorical</i>	<i>in-kind (cooking gas)</i> new (provided via existing schemes)	<i>family maintenance (housing)</i> households in the slum areas of north-west Delhi				
		Programs of Government of Delhi monthly in-kind transfer (food)	<i>social assistance - categorical</i>	<i>in-kind (food)</i> new	<i>family maintenance (food insecurity)</i> households in the slum areas of north-west Delhi				

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Santana, 2022, Brazil	cross-sectional analysis	NA basic food parcels (in-kind transfer to families in social vulnerability situations)	<i>social assistance - categorical</i>	<i>in-kind (food)</i> new	<i>family maintenance (food)</i> families in situations of social vulnerability in the state of Ceará	having received one of the mentioned social policies	NA	food insecurity	receipt of basic food parcels was not associated with food insecurity
		NA fresh food distribution (in-kind transfer to families in social vulnerability conditions)	<i>social assistance - categorical</i>	<i>in-kind (food)</i> new	<i>family maintenance (food)</i> families in situations of social vulnerability in the state of Ceará				receipt of fresh fruit was not associated with food insecurity
		NA cooking gas vouchers (in-kind transfer to families in social vulnerability situations)	<i>social assistance - categorical</i>	<i>in-kind (food voucher)</i> new	<i>family maintenance (housing)</i> families in situations of social vulnerability in the state of Ceará				cooking gas voucher program was associated with higher food insecurity
Santos, 2022, Argentina	cross-sectional analysis	Food bags in-kind transfer (food)	<i>social assistance - categorical</i>	<i>in-kind (food)</i> existing	<i>family maintenance (food insecurity)</i> households that requested some kind of assistance	combinations of the programs mentioned in column D	household size, presence of under-18, access to internet, maximum educational level of household, at least one member is working, borrowing	food insecurity	receiving food bags was related to a higher probability of adult members skipping meals and reducing their portions.
		More Life Food Stamp food stamp - provincial	<i>social assistance - means-tested scheme</i>	<i>in-kind (food vouchers)</i> existing	<i>family maintenance (food insecurity)</i> households that requested some kind of assistance				receiving national food stamps was related with a lower probability of food insecurity in all outcomes
		Municipal food stamp food stamp - municipal	<i>social assistance - means-tested scheme</i>	<i>in-kind (food vouchers)</i> existing	<i>family maintenance (food insecurity)</i> households that requested some kind of assistance				receiving municipal food transfers was related with a higher probability of adult members skipping meals

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Food insecurity > Social assistance - in-kind benefits > Low-income countries									
Abay, 2021, Ethiopia	quasi-experiment/natural experiment study	Productive Safety Net Program (PSNP) unconditional cash transfers or in-kind (food) transfers for households whose main income earners are elder or disabled	<i>social assistance - categorical</i>	<i>in-kind (food) and in-cash (general transfer)</i> existing	<i>family maintenance (food insecurity)</i> poor households with at least one child with less than 24 months of age	participation in the PSNP [mixed]	time invariant and observable time-varying characteristics	food insecurity	participation in the PSNP offsets (almost completely) the parallel increase in food insecurity due to the pandemic.
Mnyanga, 2022, Malawi	cross-sectional analysis	NA free food	social assistance - means-tested scheme	<i>in-kind (food)</i> existing	<i>family maintenance (income)</i> general population	receiving any kind of social benefit [mixed]	household demographic characteristics, household head characteristics (age, sex, education level, sector of employment, marital status), wealth category of the household, place of residence, region, economic shocks, health shocks and socio-political shocks	reducing food consumption	households that received social assistance were less likely to reduce food consumption
		NA other in-kind transfers	social assistance - means-tested scheme	<i>in-kind (other goods, excluding food)</i> existing	<i>family maintenance (other)</i> general population				
Food insecurity > Social insurance > High-income countries									
Berkowitz, 2021a, USA	quasi-experiment/natural experiment	Federal Pandemic Unemployment Compensation (FPUC) unemployment benefits (increase)	<i>social insurance</i>	<i>in-cash (unemployment)</i> new	<i>unemployment</i> general population	expiration of unemployment benefits	age, gender, self-reported age/ethnicity, education, pre-pandemic annual household income category, marital status, pre-pandemic food insufficiency, work in the past seven days, household size, state of residence, state level COVID-19 cases per capita, calendar date of survey administration	food insufficiency	higher food insufficiency after expiration of benefits

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Raifman, 2021a, USA	quasi-experiment/natural experiment study	NA	<i>social insurance</i>	<i>in-cash (unemployment)</i>	<i>unemployment</i>	receipt of unemployment benefits	individuals and survey wave fixed-effects, receiving a federal stimulus payment, receiving Supplemental Nutrition Assistance Program (SNAP) benefits in the month prior to the survey, and employment status at the time of the survey	food insecurity	receipt of unemployment insurance was associated with a decreased food insecurity (4.3 pp)
		unemployment benefits		existing	low- and middle income households (ie, <\$75 000 annual income) who lost work during the COVID-19 pandemic			eating less due to financial constraints	receipt of unemployment insurance was associated with a decrease in eating less due to financial constraints (5.7 pp)
		NA	<i>social insurance</i>	<i>in-cash (unemployment)</i>	<i>unemployment</i>	receipt of increased unemployment benefits		food insecurity	receipt of unemployment benefit supplement was associated with stronger decreases in food insecurity
		unemployment benefits with CARES act supplement (600\$/week)		adapted	low- and middle income households (ie, <\$75 000 annual income) who lost work during the COVID-19 pandemic			eating less due to financial constraints	receipt of unemployment benefit supplement was associated with stronger decreases in eating less due to financial constraints
Berkowitz, 2021b, USA	cross-sectional analysis	NA	<i>social insurance</i>	<i>in-cash (unemployment)</i>	<i>unemployment</i>	receipt of unemployment benefits	age, gender, self-reported race/ethnicity, education level, 2019 annual household income, marital status, household size, state, and survey date	food insufficiency	lower risk for food insecurity
Kim, 2021, USA	cross-sectional analysis	NA	<i>social insurance</i>	<i>in-cash (unemployment)</i>	<i>unemployment</i>	financial hardship, controlling for receipt of social assistance/insurance	age, gender, race/ethnicity, marital status, educational attainment, 2019 household income, use of federal stimulus assistance, household size, presence of children in the household, overall health status, state of residence, survey period	food insufficiency	receipt of unemployment benefits was not significantly related to a reduction in food insufficiency (i.e. they did not offset the insufficiency likely caused by financial hardship)

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Ogundari, 2022, USA	cross-sectional analysis	NA unemployment insurance	<i>social insurance</i>	<i>in-cash (unemployment)</i> existing	<i>unemployment</i> general population	participation in SNAP, receipt of UI or participation to charitable food assistance	income levels, marital status, gender, race/ethnicity, educational levels, age and household size, region, time	food sufficiency	receipt of unemployment insurance is associated with higher levels of food sufficiency
Food insecurity > Social insurance > Middle-income countries									
Gelo, 2022, South Africa	cross-sectional analysis	NA old age pension	<i>social insurance</i>	<i>in-cash (pension)</i> existing	<i>old-age pension</i> general population (sample of adults who were employed before the first month of lockdown)	total amount of money received via either one of the two measures mentioned	sex, rural, urban, race, household size, education, age, number of kids, per capita income	child hunger	in case of job loss, receipt of old age pension grant is not related with decreased likelihood of child hunger
								household hunger	in case of job loss, a receipt of old age pension grant is related with a lower likelihood of reporting household hunger
Santos, 2022, Argentina	cross-sectional analysis	Non-contributive pension (NCP) pension for older individuals, disabled, mothers of 7 children	<i>social insurance</i>	<i>in-cash (pension)</i> existing	<i>old-age pension, disability, family maintenance (income)</i> households that requested some kind of assistance	combinations of the programs mentioned in column D	household size, presence of under-18, access to internet, maximum educational level of household, at least one member is working, borrowing	food insecurity	receiving pension (NCP) was not related to food insecurity
Food insecurity > Other measures > High-income countries									
An, 2021, USA	(1) longitudinal analysis (2) quasi-experiment/ natural experiment study	NA moratorium on evictions	<i>other</i>	<i>moratorium on evictions</i> new	<i>family maintenance (housing issues)</i> general population	implementation of eviction moratorium in the state	time- and place-varying control terms such as unemployment rate and house price appreciation	household food insecurity	unclear (no effect on self-reported food insecurity, reduction of google searches related to food insecurity)

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Das, 2022, USA	quasi-experiment/natural experiment study	Earned Income Tax Credit (EITC) tax credit	<i>social assistance - categorical</i>	<i>general labour and fiscal measure (tax credit)</i> existing	<i>family maintenance (income)</i> lower income households with dependent children	(1) eligibility for EITC (2) Maximum state EITC (3) State EITC as % of federal EITC	State fixed effects, division fixed effects, period fixed effects, individual/households controls (household size, age, annual household income, number of dependents below 18, marital status, race, Hispanic status, female indicator, educational attainment, homeownership status, and employment status in the last 7 days), state-level temporal controls, division-period interaction	food insufficiency	using DD and DDD, State EITC eligibility reduced food insufficiency among eligible households between March 2021 and early October 2021 using event study methodology, the effect of EITC on food insufficiency was not visible in the bimonthly periods after March 2021
Wahdat, 2021, USA	longitudinal analysis (pre-post analysis)	Economic Impact Payments (EIPs) one-time refundable tax credit / stimulus payment	<i>social assistance - categorical</i>	<i>general labour and fiscal measure (tax credit)</i> new	<i>family maintenance (income)</i> general population	receipt or anticipation of EIP payment	socio-demographic variables: number of adults, number of kids, age, gender, marital status, race, ethnicity, income, education, employment status, tenant, and health status, state and survey fixed-effects	food insufficiency	significant reduction of food insufficiency

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Raifman, 2021b, USA	cross-sectional analysis	NA	<i>labour market intervention</i>	<i>general labour and fiscal measure</i>	<i>family maintenance (income)</i>	(1) receipt of state minimum wage in four categories (2) missing work due to COVID-19	participant level characteristics (race and ethnicity, age group, gender identity, marital status, educational attainment, household composition, work status, other sources of food, health insurance, receipt of supplemental nutrition assistance program benefits, unemployment insurance, stimulus payments, survey wave)	food insufficiency	only the highest level of minimum wage was associated with a lower proportion of households reporting food insufficiency
		state minimum wage		existing	general population (under 65 years old)			very low child food sufficiency	only the highest level of minimum wage was associated with a lower proportion of households reporting very low child food sufficiency
		NA	<i>employer liability</i>	<i>in-cash (sickness)</i>	<i>sickness</i>			food insufficiency	Missing work due to COVID-19 without paid sick leave was associated with a higher proportion of households reporting food insufficiency
		paid sick leave		existing	general population (under 65 years old)				
Food insecurity > Other measures > Middle-income countries									
Ayo-Lawal, 2022, Nigeria	cross-sectional analysis	Covid-19 Fiscal Stimulus loans to small scale business owners	<i>other</i>	<i>other (loans)</i> new	? general population	receiving any type of social assistance [mixed]	household-level variables, including zones in which households are located, type of household, households' metropolitan status, and age of household head	food insecurity	households that benefitted from social assistance were less likely to experience food insecurity (not significant)

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Food insecurity > Other measures > Low-income countries									
Abay, 2021, Ethiopia	quasi-experiment/natural experiment study	Productive Safety Net Program (PSNP) labour-intensive public works for six months a year (households with able-bodied members): exempted during the pandemic	<i>public employment program</i>	<i>general labour and fiscal measure</i> adapted	<i>family maintenance (income)</i> poor households with at least one child with less than 24 months of age	participation in the PSNP [mixed]	time invariant and observable time-varying characteristics	food insecurity	participation in the PSNP offsets (almost completely) the parallel increase in food insecurity due to the pandemic
		Productive Safety Net Program (PSNP) provision of information on maternal and child nutrition practices	<i>other</i>	<i>in-kind (information)</i> existing	<i>education??</i> poor households with at least one child with less than 24 months of age				
Financial and employment insecurity > Social assistance - in-cash benefits > High-income countries									
Persaud, 2021, Canada	experimental study	NA one-time cash transfer for people who are unable to physically distance due to insufficient income	social assistance - categorical	<i>in-cash (general transfer)</i> new	<i>family maintenance (income)</i> individuals who reported trouble affording basic necessities due to disruptions related to COVID-19	being allocated to the treatment group (receipt of cash transfer)	not specified (stratifications for age and gender)	ability to make ends meet	no changes after two weeks
Jacob, 2022, USA	experimental study	NA unconditional, one-time cash transfer to low-income individuals	social assistance - means-tested scheme	<i>in-cash (general transfer)</i> new	<i>family maintenance (income)</i> sample of families receiving SNAP benefits, from ZIP codes with poverty rates of at least 35%	receipt of one-time cash transfer	Spanish language, age, state, race/ethnicity, sex, education, households size, total number of kids, marital and living status, SNAP benefits, missing benefits, zip code covariates and state fixed effects	material hardship (index from 16 types of hardships, ranging from not being able to pay the full amount of bills, worry about running out of food, etc)	effects are small and not statistically different from zero

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Jacob, 2022, USA (continued)								core debt (basic necessities such as rent/ mortgage, gas/electric and phone/ internet bills)	no effect
								total debt (formal or informal loans, medical debt, back owed debt on credit cards)	no effect
								coping strategies (us of food banks, sold items to make ends meet, cut back spending to make ends meet)	no effect
								labour market participation	no effect
								hours worked	no effect
								monthly earnings	no effect
								searching for a job	receipt of the cash transfer is associated with a 6 percentage point increase in the likelihood of searching for a job

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Botha, 2022, Australia	cross-sectional analysis	Coronavirus Supplement cash transfers (temporary income support payment for unemployed jobseekers)	social assistance - categorical	<i>in-cash (unemployment)</i> new	<i>family maintenance (income)</i> general population	receiving the coronavirus supplement (fully mediated by financial distress for mental health)	age, sex region, time	financial distress (how comfortable people are in paying for essential services)	the Coronavirus Supplement was significantly associated with lower financial distress
Idrovo-Aguirre, 2021, Chile	cross-sectional analysis	Emergency Family Income (EFI) cash-transfers for households in extreme poverty	social assistance - means-tested scheme	<i>in-cash (general transfer)</i> new	<i>family maintenance (income)</i> unemployed construction workers	Received EFI, PFA withdrawal or both	worked informally, debt expenses, expects rising income within 12 months, gender, age, education	probability of not accepting a formal job offer	receiving both EFI and PFA withdrawal was associated with an increased probability of rejecting a job offer
Financial and employment insecurity > Social assistance - in-cash benefits > Middle-income countries									
Londono-Velez, 2022, Colombia	experimental study	NA unconditional cash transfers (actually VAT compensation of a fixed amount for poor households), paid every five to eight weeks to households in poverty	social assistance - means-tested scheme	<i>in-cash (general transfer)</i> new	<i>family maintenance (income)</i> families under the extreme poverty threshold	receipt of unconditional cash transfer	municipality fixed effects as well as baseline controls for sex, age, victim status, civil status, employment sector, living in an urban area, being a recipient of Colombia Mayor, and SISBEN score.	financial health / coping strategies	cash transfers reduced the likelihood of having to sell/pawn belongings, but left unchanged other aspects (deplete savings, borrow money, skip loan payment, stop other payments)
Strupat, 2022b, Kenya	quasi-experiment/natural experiment study	National Safety net Programme (NSNP) cash-transfer to older people, people with disabilities, orphans and vulnerable children (expanded via lump-sum payments and increasing level of support)	social assistance - categorical	<i>in-cash (general transfer)</i> adapted	<i>family maintenance (income)</i> households that operate in the informal sector economy	receiving social assistance (either one of the two policies mentioned)	age and sex of the respondent, education level of the respondent, marital status of the respondent, chronic illness and disability in the household, household size, gender of the household head, the household's share of elderly and children, and coverage from other social protection measures, country dummies	prevalence of economic shocks (household member lost a job/lost income, leading to serious problems in the household's ability to pay essential expenses)	social assistance was related with a lower probability of reporting economic shocks

Study ID (first author, publication year, geographical setting)	Study design	Name and description of the social protection measure	Type of scheme	Type of social protection measure and age of scheme	Targeted contingency and population included	Description of intervention exposure	Identified confounders	Assessed outcome variables	Results		
Strupat, 2022b, Kenya (continued)								prevalence of income poverty (per capita household income)	social assistance was related with a lower probability of reporting income poverty		
								prevalence of lived poverty (how often individuals go without clean water)	social assistance was not related to this outcome		
								prevalence of lived poverty (how often individuals go without cooking fuel)	social assistance was not related to this outcome		
		Hunger Safety Net Programme (HSNP)	cash transfer for vulnerable households (expanded via lump-sum payments and increasing level of support)	social assistance - means-tested scheme	in-cash (general transfer)	adapted	family maintenance (income) households that operate in the informal sector economy			coping strategy (selling assets)	social assistance was related with a lower probability of selling assets in the event of an economic shock
		coping strategy (depleting savings)								social assistance was not related to this outcome	
		coping strategy (taking a loan)								social assistance was not related to this outcome	
		coping strategies (borrowing money from a family/other households)								social assistance was not related to this outcome	
		household asset wealth index								social assistance was not related to this outcome	

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Aslanyan, 2021, Armenia	cross-sectional analysis	NA	social assistance - categorical	<i>in-cash (general transfer)</i>	<i>family maintenance (income)</i>	two exposures (unclear definition): - receipt of any direct financial assistance (probably including cash transfers, unemployment benefits, tuition fee subsidy) [mixed] - aid at large (subsidized usage of utilities)	employment changes, low income, decreased salary, low income/very low income, savings, demographic and regional controls	Worries for financial instability / job situation	financial aid was positively related with worries of inability to cover expenses
		direct financial assistance (cash transfers)		new	working age individuals				
		NA	social assistance - categorical	<i>in-cash (unemployment)</i>	<i>unemployment</i>				working age individuals
		direct financial assistance for unemployed individuals		new			objective financial strain (inability to cover expenses)	financial aid was not related to inability to cover expenses.	
Das, 2021, India	cross-sectional analysis	PM-GKY package (<i>Pradhan Mantri Garib Kalyan Yojana</i>) - Government of India	social assistance - categorical	<i>in-cash (general transfer)</i>	<i>family maintenance (income)</i>	total amount of benefit from welfare schemes (including cash-transfers and in-kind transfers) [mixed]	family size, daily wage before lockdown	daily expenditures during lockdown	no association
		one-time cash-transfers (for farmers - PM-KISAN)		new (provided via existing schemes)	households in the slum areas of north-west Delhi				
		PM-GKY package (<i>Pradhan Mantri Garib Kalyan Yojana</i>) - Government of India	social assistance - categorical	<i>in-cash (general transfer)</i>	<i>family maintenance (income)</i>				households in the slum areas of north-west Delhi
		monthly cash-transfers (for women - PM-JDI)		new (provided via existing schemes)				borrowing as a source of expenditure	a higher amount of benefits received from schemes is associated with lower borrowing as source of expenditure
		PM-GKY package (<i>Pradhan Mantri Garib Kalyan Yojana</i>) - Government of India	social assistance - categorical	<i>in-cash (general transfer)</i>	<i>family maintenance (income)</i>	households in the slum areas of north-west Delhi			
		one-time cash-transfer (pensioners, handicapped, widows)		new (provided via existing schemes)					

Study ID (first author, publication year, geographical setting)	Study design	Name and description of the social protection measure	Type of scheme	Type of social protection measure and age of scheme	Targeted contingency and population included	Description of intervention exposure	Identified confounders	Assessed outcome variables	Results
Das, 2021, India (continued)		Programs of Government of Delhi cash-transfers (transport service providers)	social assistance - categorical	<i>in-cash (general transfer)</i> new	<i>family maintenance (income)</i> households in the slum areas of north-west Delhi			help from friends as a source of expenditure	no association
		Programs of Government of Delhi cash-transfers (construction workers)		<i>in-cash (general transfer)</i> new	<i>family maintenance (income)</i> households in the slum areas of north-west Delhi				
de Leon, 2021, Brazil	cross-sectional analysis	Auxilio Emergencial (AE) cash transfer targeting low income individuals who were unemployed or informally unemployed during the pandemic	social assistance - means-tested scheme	<i>in-cash (unemployment)</i> new	<i>family maintenance (income)</i> families with incomes around the AE eligibility income threshold	AE eligibility	pre-pandemic household income, unemployment status, a behaviour index, indicators for whether received government benefits, and if was registered in Cadastro Unico. It also includes marital status, age, race, education, gender, whether the participant shares a household with somebody more than 60 years of age, if voted for Bolsonaro, number of individuals living in the household and a social desirability index. Fixed effects.	being unemployed	AE eligibility was associated with a higher probability of being unemployed
									number of hours worked
Varshney, 2021, India	cross-sectional analysis	PM-GKY package (Pradhan Mantri Garib Kalyan Yojana) cash-transfers (for farmers - PM-KISAN)	social assistance - categorical	<i>in-cash (general transfer)</i> new (provided via existing schemes)	<i>family maintenance (income)</i> smallholder households from three Indian states	Receipt of benefits from the PM-GKY package [mixed]	matching variables: gender, age, education, household size, religion, schedule cast and tribe, below poverty line, Kisan credit card, land size, primary sources of income, farm experience, smartphone, tractor, asset index, soil health, crop insured, access to extension services, social network, distance to villages with various resources, soil type, rainfed cultivation	investments in agricultural inputs	the cash transfer scheme for farmers was significantly associated with procurement of agricultural inputs (seeds, pesticides and fertilizers)
		PM-GKY package (Pradhan Mantri Garib Kalyan Yojana) cash-transfers (for women - PM-JDI)		<i>in-cash (general transfer)</i> new (provided via existing schemes)	<i>family maintenance (income)</i> smallholder households from three Indian states				

Study ID (first author, publication year, geographical setting)	Study design	Name and description of the social protection measure	Type of scheme	Type of social protection measure and age of scheme	Targeted contingency and population included	Description of intervention exposure	Identified confounders	Assessed outcome variables	Results
Financial and employment insecurity > Social assistance - in-cash benefits > Low-income countries									
Abay, 2021, Ethiopia	quasi- experiment/ natural experiment study	Productive Safety Net Program (PSNP) unconditional cash transfers or in-kind (food) transfers for households whose main income earners are elder or disabled	social assistance - categorical	<i>in-kind (food) and in-cash (unconditional)</i> existing	<i>family maintenance (food insecurity)</i> poor households with at least one child with less than 24 months of age	participation in the PSNP [mixed]	time invariant and observable time-varying characteristics	reduction of expenditures on agricultural inputs	households that receive PSNP benefits were less likely to reduce expenditures on agricultural inputs
Mnyanga, 2022, Malawi	cross-sectional analysis	Covid-19 Urban Cash Intervention cash transfer (inferred - no other info)	social assistance - means-tested scheme	<i>in-cash (general transfer)</i> new	<i>family maintenance (income)</i> general population	receiving any kind of social benefit [mixed]	household demographic characteristics, household head characteristics (age, sex, education level, sector of employment, marital status), wealth category of the household, place of residence, region, economic shocks, health shocks and socio-political shocks	engaging in additional income- generating activities	receiving social assistance was not related with engagement in other income generating activities
		Social Cash Transfers (SCTs) cash-transfers	social assistance - means-tested scheme	<i>in-cash (general transfer)</i> existing	<i>family maintenance (food)</i> general population			receiving assistance from friends and family	households that received social assistance were also more likely to rely on remittances from friends and family
		NA other cash transfers	social assistance - means-tested scheme	<i>in-cash (general transfer)</i> existing	<i>family maintenance (income)</i> general population			relying on savings	households that received social assistance were less likely to rely on savings
									failure to cope

Study ID (first author, publication year, geographical setting)	Study design	Name and description of the social protection measure	Type of scheme	Type of social protection measure and age of scheme	Targeted contingency and population included	Description of intervention exposure	Identified confounders	Assessed outcome variables	Results
Financial and employment insecurity > Social assistance - in-kind benefits > High-income countries									
Das, 2021, India	cross-sectional analysis	PM-GKY package (<i>Pradhan Mantri Garib Kalyan Yojana</i>) - Government of India	social assistance - categorical	<i>in-kind (food)</i>	<i>family maintenance (food insecurity)</i>	total amount of benefit from welfare schemes (including cash-transfers and in-kind transfers) [mixed]	family size, daily wage before lockdown	daily expenditures during lockdown	no association
		monthly in-kind support (food-PM-AVY)		new (provided via existing schemes)	households in the slum areas of north-west Delhi				
		PM-GKY package (<i>Pradhan Mantri Garib Kalyan Yojana</i>) - Government of India	social assistance - categorical	<i>in-kind (cooking gas)</i>	<i>family maintenance (housing)</i>	households in the slum areas of north-west Delhi		saving as a source of expenditure	no association
		monthly in-kind benefits (cooking gas - PM-UY)		new (provided via existing schemes)					
Programs of Government of Delhi	social assistance - categorical	<i>in-kind (food)</i>	<i>family maintenance (food insecurity)</i>	households in the slum areas of north-west Delhi	borrowing as a source of expenditure	a higher amount of benefits received from schemes is associated with lower borrowing as source of expenditure			
monthly in-kind transfer (food)		new	help from friends as a source of expenditure		no association				
Varshney, 2021, India	cross-sectional analysis	PM-GKY package (<i>Pradhan Mantri Garib Kalyan Yojana</i>)	social assistance - categorical	<i>in-kind (food)</i>	<i>family maintenance (food insecurity)</i>	(1) receipt of benefits from the PM-GKY package (2) receipt of benefits from any of the packages [mixed]	matching variables: gender, age, education, household size, religion, schedule cast and tribe, below poverty line, Kisan credit card, land size, primary sources of income, farm experience, smartphone, tractor, asset index, soil health, crop insured, access to extension services, social network, distance to villages with various resources, soil type, rainfed cultivation	investments in agricultural inputs	receipt of benefits from any package was significantly associated with procurement of agricultural inputs (seeds, pesticides and fertilizers)
		in-kind support (food-PM-AVY)		new (provided via existing schemes)	smallholder households from three Indian states				
		PM-GKY package (<i>Pradhan Mantri Garib Kalyan Yojana</i>)	social assistance - categorical	<i>in-kind (cooking gas)</i>	<i>family maintenance (housing)</i>	smallholder households from three Indian states			
		monthly in-kind benefits (cooking gas - PM-UY)		new (provided via existing schemes)					

Study ID (first author, publication year, geographical setting)	Study design	Name and description of the social protection measure	Type of scheme	Type of social protection measure and age of scheme	Targeted contingency and population included	Description of intervention exposure	Identified confounders	Assessed outcome variables	Results
Financial and employment insecurity > Social assistance - in-kind benefits > Low-income countries									
Abay, 2021, Ethiopia	quasi-experiment/natural experiment study	Productive Safety Net Program (PSNP) unconditional cash transfers or in-kind (food) transfers for households whose main income earners are elder or disabled	social assistance - categorical	<i>in-kind (food) and in-cash (unconditional)</i> existing	<i>family maintenance (food insecurity)</i> poor households with at least one child with less than 24 months of age	participation in the PSNP [mixed]	time invariant and observable time-varying characteristics	reduction of expenditures on agricultural inputs	households that receive PSNP benefits were less likely to reduce expenditures on agricultural inputs
Mnyanga, 2022, Malawi	cross-sectional analysis	NA free food	social assistance - means-tested scheme	<i>in-kind (food)</i> existing	<i>family maintenance (income)</i> general population	receiving any kind of social benefit [mixed]	household demographic characteristics, household head characteristics (age, sex, education level, sector of employment, marital status), wealth category of the household, place of residence, region, economic shocks, health shocks and socio-political shocks	engaging in additional income-generating activities	receiving social assistance was not related with engagement in other income generating activities
		NA other in-kind transfers	social assistance - means-tested scheme	<i>in-kind (other goods, excluding food)</i> existing	<i>family maintenance (other)</i> general population			receiving assistance from friends and family	households that received social assistance were also more likely to rely on remittances from friends and family
								relying on savings	households that received social assistance were less likely to rely on savings
								failure to cope	not related
Financial and employment insecurity > Social insurance > High-income countries									
Berkowitz, 2021a, USA	quasi-experiment/natural experiment	Federal Pandemic Unemployment Compensation (FPUC) unemployment benefits (increase)	social insurance	in-cash (unemployment) new	<i>unemployment</i> general population	expiration of unemployment benefits	age, gender, self-reported age/ethnicity, education, pre-pandemic annual household income category, marital status, pre-pandemic food insufficiency, work in the past seven days, household size, state of residence, state level COVID-19 cases per capita, calendar date of survey administration	missed housing payment	after expiration of benefits, increased risk for missed housing payments

Study ID (first author, publication year, geographical setting)	Study design	Name and description of the social protection measure	Type of scheme	Type of social protection measure and age of scheme	Targeted contingency and population included	Description of intervention exposure	Identified confounders	Assessed outcome variables	Results
Berkowitz, 2021b, USA	cross-sectional analysis	NA unemployment benefits (increase)	social insurance	in-cash (unemployment) adapted	<i>unemployment</i> general population	receipt of unemployment benefits	age, gender, self-reported race/ethnicity, education level, 2019 annual household income, marital status, household size, state, and survey date	missed housing payment	lower risk for missing housing payment
								lacking confidence in affording next month food	lower risk for lacking confidence in affording next month food
								lacking confidence in affording next month housing	lower risk for lacking confidence in affording next month housing
Kim, 2021, USA	cross-sectional analysis	NA unemployment insurance	social insurance	in-cash (unemployment) existing	<i>unemployment</i> individuals with income disruption in their households, adult housing renters	financial hardship, controlling for receipt of social assistance/ insurance	age, gender, race/ ethnicity, marital status, educational attainment, 2019 household income, use of federal stimulus assistance, household size, presence of children in the household, overall health status, state of residence, survey period	likely housing eviction	receipt of UI benefits was significantly related with lower odds of housing eviction, but were not enough to offset the large negative associations with financial hardship
Financial and employment insecurity > Other measures > High-income countries									
An, 2021, USA	(1) longitudinal analysis (2) quasi-experiment/ natural experiment study	NA moratorium on evictions	other	<i>moratorium on evictions</i> new	<i>family maintenance (housing issues)</i> general population	implementation of eviction moratorium in the state	time- and place-varying control terms such as unemployment rate and house price appreciation	credit card spending	positive and significant effect of state eviction moratoria on credit card spending and card debt payoff
Tsai, 2021b, USA	longitudinal analysis	Economic Impact Payments (EIPs) one-time refundable tax credit / stimulus payment	social assistance - categorical	<i>general labour and fiscal measure (tax credit)</i> new	low- and middle income adults (ie, <\$75 000 annual income)	receipt of EIP	age, marital status, number of minors at home, employment status, income, veteran status, social support score, COVID-19 positive screen, psychiatric history and survey wave	financial distress score	EIP was not related to financial distress

Study ID (first author, publication year, geographical setting)	Study design	Name and description of the social protection measure	Type of scheme	Type of social protection measure and age of scheme	Targeted contingency and population included	Description of intervention exposure	Identified confounders	Assessed outcome variables	Results
Idrovo-Aguirre, 2021, Chile	cross-sectional analysis	NA ability to withdraw funds from the mandatory privately-managed pension system of the Pension Fund Administrator (PFA)	other	<i>in-cash (other)</i> new	<i>family maintenance (income)</i> unemployed construction workers	Received EFI, PFA withdrawal or both	worked informally, debt expenses, expects rising income within 12 months, gender, age, education	probability of not accepting a formal job offer	receiving both EFI and PFA withdrawal was associated with an increased probability of rejecting a job offer
Financial and employment insecurity > Other measures > Middle-income countries									
Afridi, 2021, India	quasi-experiment/natural experiment study	MG-NREGA (<i>Mahatma Gandhi National Rural Employment Guarantee Act</i>) 100 days of manual work on publicly funded projects are mandate for rural households in India	public employment program	<i>in-cash (unemployment)</i> existing (budget expanded)	<i>unemployment</i> general population (working age: 15-59)	historical state capacity to provide MG-NREGA work	individual, month, year fixed effects	employment status	districts in rural areas with a higher historical capacity of providing public employment were associated with higher rates of employment (only after the first lockdown phase)
Aslanyan, 2021, Armenia	cross-sectional analysis	NA subsidized usage of utilities	other	<i>subsidy (utilities)</i> new	<i>family maintenance (housing issues)</i> working age individuals	two exposures (unclear definition): - receipt of any direct financial assistance (probably including cash transfers, unemployment benefits, tuition fee subsidy) [mixed] - aid at large (subsidized usage of utilities)	employment changes, low income, decreased salary, low income/very low income, savings, demographic and regional controls	Worries for financial instability / job situation	aid at large was not related to worries in any dimension
		NA direct financial assistance (wage support)	labour market intervention	<i>in-cash (wage support)</i> new	<i>family maintenance (income)</i> working age individuals			subjective financial strain (financial stress)	aid at large was not related to subjective financial stress.
		NA direct financial assistance (tuition fee support)	other	<i>in-cash (education)</i> new	<i>education??</i> working age individuals			objective financial strain (inability to cover expenses)	aid at large was not related to inability to cover expenses.

Study ID (first author, publication year, geographical setting)	Study design	Name and description of the social protection measure	Type of scheme	Type of social protection measure and age of scheme	Targeted contingency and population included	Description of intervention exposure	Identified confounders	Assessed outcome variables	Results
Financial and employment insecurity > Other measures > Low-income countries									
Abay, 2021, Ethiopia	quasi-experiment/natural experiment study	Productive Safety Net Program (PSNP)	public employment program	<i>general labour and fiscal measure</i> adapted	<i>family maintenance (income)</i> poor households with at least one child with less than 24 months of age	participation in the PSNP [mixed]	time invariant and observable time-varying characteristics	reduction of expenditures on agricultural inputs	households that receive PSNP benefits were less likely to reduce expenditures on agricultural inputs
		Productive Safety Net Program (PSNP)	other	<i>in-kind (information)</i> existing	<i>education??</i> poor households with at least one child with less than 24 months of age				
Mental and physical health > Social assistance - in-cash benefits > High-income countries									
Jacob, 2022, USA	experimental study	NA unconditional, one-time cash transfer to low-income individuals	social assistance - means tested scheme	<i>in-cash (general transfer)</i> new	<i>family maintenance (income)</i> sample of families receiving SNAP benefits, from ZIP codes with poverty rates of at least 35%	receipt of one-time cash transfer	Spanish language, age, state, race/ethnicity, sex, education, households size, total number of kids, marital and living status, SNAP benefits, missing benefits, zip code covariates and state fixed effects	depression	no effect
								anxiety	no effect
								mental health (depression and anxiety combined score)	effects are small and not statistically different from zero
								stress (Stress Overload Scale Short)	no effect
								health (Somatic Symptom Scale)	no effect
								child behaviour problems	no effect
								parenting problems	no effect
intimate partner conflict	no effect								

Study ID (first author, publication year, geographical setting)	Study design	Name and description of the social protection measure	Type of scheme	Type of social protection measure and age of scheme	Targeted contingency and population included	Description of intervention exposure	Identified confounders	Assessed outcome variables	Results
Persaud, 2021, Canada	experimental study	NA one-time cash transfer for people who are unable to physically distance due to insufficient income	social assistance - categorical	<i>in-cash (general transfer)</i> new	<i>family maintenance (income)</i> individuals who reported trouble affording basic necessities due to disruptions related to COVID-19	being allocated to the treatment group (receipt of cash transfer)	not specified (stratifications for age and gender)	general health (very good or excellent)	no changes after two weeks
Botha, 2022, Australia	cross-sectional analysis	Coronavirus Supplement cash transfers (temporary income support payment for unemployed jobseekers)	social assistance - categorical	<i>in-cash (unemployment)</i> new	<i>family maintenance (income)</i> general population	receiving the coronavirus supplement (fully mediated by financial distress for mental health)	age, sex region, time	mental health (frequency of feeling anxious or depressed during the past week)	lower financial distress was associated with improved mental health
Spence, 2022, USA	cross-sectional analysis	Supplemental Nutrition Assistance Program (SNAP) purpose-specific cash-transfers (food)	social assistance - means-tested scheme	<i>in-cash (food)</i> adapted	<i>family maintenance (food insecurity)</i> general population	participating in at least one / all programs	matching variables: age (under 35), children in household, negative job change, education (at least a bachelor's degree), household size (4 or more individuals), and rurality.	perceived stress	using SNAP is not associated with perceived stress
Mental and physical health > Social assistance - in-cash benefits > Middle-income countries									
Londono-Velez, 2022, Colombia	experimental study	NA unconditional cash transfers (actually VAT compensation of a fixed amount for poor households)	social assistance - categorical	<i>in-cash (general transfer)</i> new	<i>family maintenance (income)</i> families under the extreme poverty threshold	receipt of unconditional cash transfer	municipality fixed effects as well as baseline controls for sex, age, victim status, civil status, employment sector, living in an urban area, being a recipient of Colombia Mayor, and SISBEN score.	mental health	cash transfers are associated with decreases in mental health symptoms (difficulty sleeping, anxiety, etc) but not significantly
Ohnberger, 2022, South Africa	quasi-experiment/natural experiment study	Child Support Grant (CSG) cash transfers (for families with children, benefits were scaled up during Covid-19)	social assistance - categorical	<i>in-cash (general transfer)</i> adapted	<i>family maintenance (income)</i> general population (18 or older): subsample of individuals in the lowest wealth quartile	(1) if the individual lives in a household that received CSG (2) no receipt of CSG, receipt of May scale up, receipt of June scale up	time effects	health	Individuals who were exposed to the income shock and were not protected by the CSG have a statistically significant and largest loss in health. The CSG ad a protective effect for individuals who suffered the income shock but received the CSG

Study ID (first author, publication year, geographical setting)	Study design	Name and description of the social protection measure	Type of scheme	Type of social protection measure and age of scheme	Targeted contingency and population included	Description of intervention exposure	Identified confounders	Assessed outcome variables	Results
de Leon, 2021, Brazil	cross-sectional analysis	Auxilio Emergencial cash transfer targeting low income individuals who were unemployed or informally unemployed during the pandemic	social assistance - categorical	<i>in-cash (unemployment)</i> new	<i>family maintenance (income)</i> families with incomes around the AE eligibility income threshold	AE eligibility	pre-pandemic household income, unemployment status, a behaviour index, indicators for whether received government benefits, and if was registered in Cadastro Unico. It also includes marital status, age, race, education, gender, whether the participant shares a household with somebody more than 60 years of age, if voted for Bolsonaro, number of individuals living in the household and a social desirability index. Fixed effects.	mental health (anxiety, depression, stress)	AE was not related to changes in mental health (except a higher non-significant risk of depression)

Mental and physical health > Social assistance - in-cash benefits > Low-income countries

Stein, 2022, Uganda	experimental study	NA one-off unconditional cash transfer for refugees	social assistance - categorical	<i>in-cash (general transfer)</i> new	<i>family maintenance (income)</i> households of a refugee settlement in Uganda	intended receipt of cash transfer (experimental variation in timing of the cash transfer due to randomized allocation by the study team)	sex of households head, household size, time in the settlement and ethnic group, baseline value of outcome	health-seeking behaviour (seek health in private healthcare facilities)	receiving the cash transfer was related with higher likelihood of seeking healthcare in private healthcare facilities
								psychological wellbeing	receiving the cash transfer was related with better psychological wellbeing

Mental and physical health > Social assistance - in-kind benefits > High-income countries

Donnelly, 2020, USA	cross-sectional analysis	NA health insurance expansion (Medicaid)	social assistance - categorical	<i>in-kind (service)</i> existing	<i>health care</i> general population	Household income shock (loss of income since March 13, 2020), controlling for policies at state level	age, race/ethnicity, gender, educational attainment, marital status, and week of interview and include a state random coefficient	mental health (depression and anxiety)	living in a state with supportive social policies (Medicaid, unemployment insurance, and suspended utility shut offs during the pandemic) weakens the association between household income shocks and mental health
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Study ID (first author, publication year, geographical setting)	Study design	Name and description of the social protection measure	Type of scheme	Type of social protection measure and age of scheme	Targeted contingency and population included	Description of intervention exposure	Identified confounders	Assessed outcome variables	Results
Spence, 2022, USA	cross-sectional analysis	Special Supplemental Nutrition Assistance Program for Women, Infants and Children (WIC)	social assistance - means-tested scheme	<i>in-kind (food) & in-kind (service/information)</i> existing	<i>family maintenance (food insecurity)</i> general population	participating in at least one / all programs	matching variables: age (under 35), children in household, negative job change, education (at least a bachelor's degree), household size (4 or more individuals), and rurality.	perceived stress	using in-kind federal nutrition programs is not associated with perceived stress
		in-kind (food) transfers, referrals to healthcare and information on healthy eating							
		school meal programs	social assistance - means-tested scheme	<i>in-kind (food)</i> existing	<i>family maintenance (food insecurity)</i> general population				
		in-kind (food) transfers (free school meals)							
Mental and physical health > Social insurance > High-income countries									
Berkowitz, 2021a, USA	quasi-experiment/natural experiment	Federal Pandemic Unemployment Compensation (FPUC)	social insurance	<i>in-cash (unemployment)</i> new	<i>unemployment</i> general population	expiration of unemployment benefits	age, gender, self-reported age/ethnicity, education, pre-pandemic annual household income category, marital status, pre-pandemic food insufficiency, work in the past seven days, household size, state of residence, state level COVID-19 cases per capita, calendar date of survey administration	depression	more frequent depression and anxiety symptoms after expiration of benefits
		unemployment benefits (increase)						anxiety	more frequent depression and anxiety symptoms after expiration of benefits

Study ID (first author, publication year, geographical setting)	Study design	Name and description of the social protection measure	Type of scheme	Type of social protection measure and age of scheme	Targeted contingency and population included	Description of intervention exposure	Identified confounders	Assessed outcome variables	Results
Berkowitz, 2021b, USA	cross-sectional analysis	NA unemployment benefits (increase)	social insurance	<i>in-cash (unemployment)</i> adapted	<i>unemployment</i> general population	receipt of unemployment benefits	age, gender, self-reported race/ethnicity, education level, 2019 annual household income, marital status, household size, state, and survey date	being uninsured (healthcare)	not significantly different
								delayed healthcare	lower risk for delayed healthcare
								delayed non-COVID-19 healthcare	lower risk for delayed healthcare
								depression	lower risk for depression
Donnelly, 2020, USA	cross-sectional analysis	NA Unemployment insurance	social insurance	<i>in-cash (unemployment)</i> existing	<i>unemployment</i> general population	Household income shock (loss of income since March 13, 2020), controlling for policies at state level	age, race/ethnicity, gender, educational attainment, marital status, and week of interview and include a state random coefficient	mental health (depression and anxiety)	living in a state with supportive social policies – primarily those related to Medicaid, unemployment insurance, and suspended utility shut offs during the pandemic – weakens the association between household income shocks and mental health
Kim, 2021, USA	cross-sectional analysis	NA unemployment insurance	social insurance	<i>in-cash (unemployment)</i> existing	<i>unemployment</i> individuals with income disruption in their households, adult housing renters	financial hardship, controlling for receipt of social assistance/ insurance	age, gender, race/ ethnicity, marital status, educational attainment, 2019 household income, use of federal stimulus assistance, household size, presence of children in the household, overall health status, state of residence, survey period	anxiety symptoms	receipt of UI benefits was significantly related with lower odds of anxiety, but not enough to offset large negative effect of financial hardship
								depressive symptoms	receipt of UI benefits was significantly related with lower odds of depression, but not enough to offset large negative effect of financial hardship

Study ID (first author, publication year, geographical setting)	Study design	Name and description of the social protection measure	Type of scheme	Type of social protection measure and age of scheme	Targeted contingency and population included	Description of intervention exposure	Identified confounders	Assessed outcome variables	Results
Mental and physical health > Moratoria on evictions > High-income countries									
An, 2021, USA	(1) longitudinal analysis (2) quasi- experiment/ natural experiment study	NA moratorium on evictions	other	<i>moratorium on evictions</i> new	<i>family maintenance (housing issues)</i> general population	implementation of eviction moratorium in the state	time- and place-varying control terms such as unemployment rate and house price appreciation	mental stress	eviction moratoria significantly reduced the number of households that reported they “can’t stop worrying.”
Leifheit, 2021, USA	longitudinal analysis	NA moratorium on evictions	other	<i>moratorium on evictions</i> existing/ adapted	<i>family maintenance (housing issues)</i> from a representative sample of US population, selection of renters with annual household income less than 75,000\$	different /changing intensity of state eviction moratoria (none, weak, strong)	state COVID-19 incidence and mortality, public health restrictions, unemployment rates	mental distress	strong protection was associated with a 12.6% reduction of mental distress compared to no protection weak protection was associated with a lower coefficient, but not statistically significant reduction
Donnelly, 2020, USA	cross-sectional analysis	NA moratorium on evictions	other	<i>moratorium on evictions</i> new	<i>family maintenance (housing issues)</i> general population	Household income shock (loss of income since March 13, 2020), controlling for policies at state level	age, race/ethnicity, gender, educational attainment, marital status, and week of interview and include a state random coefficient	mental health (depression and anxiety)	living in a state with supportive social policies – primarily those related to Medicaid, unemployment insurance, and suspended utility shut offs during the pandemic – weakens the association between household income shocks and mental health

Study ID (first author, publication year, geographical setting)	Study design	Name and description of the social protection measure	Type of scheme	Type of social protection measure and age of scheme	Targeted contingency and population included	Description of intervention exposure	Identified confounders	Assessed outcome variables	Results
Mental and physical health > Other measures > High-income countries									
Tsai, 2021b, USA	longitudinal analysis	Economic Impact Payments (EIPs) one-time refundable tax credit / stimulus payment	social assistance - categorical	<i>general labour and fiscal measure (tax credit)</i> new	<i>family maintenance (income)</i> low- and middle income adults (ie, <\$75 000 annual income)	receipt of EIP	age, marital status, number of minors at home, employment status, income, veteran status, social support score, COVID-19 positive screen, psychiatric history and survey wave	total number of medical conditions	EIP receipt was significantly associated with a reduced number of health conditions
								Covid-19 era related stress	EIP receipt was significantly associated with increased stress
								depressive symptoms	EIP receipt was significantly associated with increased depression
								anxiety symptoms	EIP was not related in changes in anxiety
								alcohol use disorders	EIP receipt was significantly associated with a reduced alcohol use problems
								use of illicit drugs in the past month	EIP was not related to use of illicit drugs
								recent suicidal ideation	EIP receipt was significantly associated with a increased frequency of recent suicidal ideation

Study ID (first author, publication year, geographical setting)	Study design	Name and description of the social protection measure	Type of scheme	Type of social protection measure and age of scheme	Targeted contingency and population included	Description of intervention exposure	Identified confounders	Assessed outcome variables	Results
Donnelly, 2020, USA	cross-sectional analysis	Earned Income Tax Credit (EITC) tax credit	social assistance - categorical	<i>general labour and fiscal measure (tax credit)</i> existing	<i>family maintenance (income)</i> general population	Household income shock (loss of income since March 13, 2020), controlling for policies at state level	age, race/ethnicity, gender, educational attainment, marital status, and week of interview and include a state random age, race/ethnicity, gender, educational attainment, marital status, and week of interview and include a state random coefficient	mental health (depression and anxiety)	presence of tax credits was not related with reductions in the income shock on mental health
		NA freeze on utility shut offs	social assistance - universal	utility / financial fee waiver new	<i>family maintenance (housing issues)</i> general population				living in a state with supportive social policies (Medicaid, unemployment insurance, and suspended utility shut offs during the pandemic) weakens the association between household income shocks and mental health
Quality of diet > Social assistance - in-cash benefits > High-income countries									
Lu, 2022, USA	cross-sectional analysis	Pandemic - EBT (Electronic Benefit Transfer) purpose-specific cash-transfers (food) for families in need with children	social assistance - means-tested scheme	<i>in-cash (food)</i> new	<i>family maintenance (food insecurity)</i> voluntary participants of a local program (Healthy Helping Fruit and Vegetable Program; eligibility: households that received SNAP benefits and that reported being negatively impacted by Covid-19)	enrolment in different food assistance programs	number of food assistance programs the respondent was enrolled in, number of household members for different age categories, income, education, rural/urban county, ethnicity	dietary intake (several categories)	no single food assistance program was consistently associated with better dietary intake than any other program included
		Emergency SNAP allotment purpose-specific cash-transfers (food) for families in need	social assistance - means-tested scheme	<i>in-cash (food)</i> adapted	<i>family maintenance (food insecurity)</i> voluntary participants of a local program (Healthy Helping Fruit and Vegetable Program; eligibility: households that received SNAP benefits and that reported being negatively impacted by Covid-19)				

Study ID (first author, publication year, geographical setting)	Study design	Name and description of the social protection measure	Type of scheme	Type of social protection measure and age of scheme	Targeted contingency and population included	Description of intervention exposure	Identified confounders	Assessed outcome variables	Results
Spence, 2022, USA	cross-sectional analysis	Supplemental Nutrition Assistance Program (SNAP) purpose-specific cash-transfers (food)	social assistance - means-tested scheme	<i>in-cash (food)</i> adapted	<i>family maintenance (food insecurity)</i> general population	participating in at least one / all programs	matching variables: age (under 35), children in household, negative job change, education (at least a bachelor's degree), household size (4 or more individuals), and rurality.	fruit and vegetable intake	Using SNAP is not associated with meeting fruit and vegetable intake recommendations.
Quality of diet > Social assistance - in-cash benefits > Low-income countries									
Abay, 2021, Ethiopia	quasi-experiment/natural experiment study	Productive Safety Net Program (PSNP) unconditional cash transfers or in-kind (food) transfers for households whose main income earners are elder or disabled	social assistance - categorical	<i>in-kind (food) and in-cash (unconditional)</i> existing	<i>family maintenance (food insecurity)</i> poor households with at least one child with less than 24 months of age	participation in the PSNP [mixed]	time invariant and observable time-varying characteristics	mother's and children's diet	access to the PSNP does not affect diet quality

Study ID (first author, publication year, geographical setting)	Study design	Name and description of the social protection measure	Type of scheme	Type of social protection measure and age of scheme	Targeted contingency and population included	Description of intervention exposure	Identified confounders	Assessed outcome variables	Results
Quality of diet > Social assistance - in-kind benefits > High-income countries									
Lu, 2022, USA	cross-sectional analysis	School meals and summer feeding program in-kind (food) transfers (free school meals)	social assistance - means-tested scheme	<i>in-kind (food)</i> existing	<i>family maintenance (food insecurity)</i> voluntary participants of a local program (Healthy Helping Fruit and Vegetable Program; eligibility: households that received SNAP benefits and that reported being negatively impacted by Covid-19)	enrolment in different food assistance programs	number of food assistance programs the respondent was enrolled in, number of household members for different age categories, income, education, rural/ urban county, ethnicity	dietary intake (several categories)	no single food assistance program was consistently associated with better dietary intake than any other program included
		Emergency Meals to You in-kind transfers (food) for students	social assistance - categorical	<i>in-kind (food)</i> new	<i>family maintenance (food insecurity)</i>				
		USDA’s Farmers to Families Food Boxes in-kind transfers (food)	social assistance - categorical	<i>in-kind (food)</i> new	<i>family maintenance (food insecurity)</i> voluntary participants of a local program (Healthy Helping Fruit and Vegetable Program; eligibility: households that received SNAP benefits and that reported being negatively impacted by Covid-19)				
		Special Supplemental Nutrition Assistance Program for Women, Infants and Children (WIC) in-kind (food) transfers, referrals to healthcare and information on healthy eating	social assistance - categorical	<i>in-kind (food)</i> & <i>in-kind (information)</i> existing	<i>family maintenance (food insecurity)</i> voluntary participants of a local program (Healthy Helping Fruit and Vegetable Program; eligibility: households that received SNAP benefits and that reported being negatively impacted by Covid-19)				

Study ID (first author, publication year, geographical setting)	Study design	Name and description of the social protection measure	Type of scheme	Type of social protection measure and age of scheme	Targeted contingency and population included	Description of intervention exposure	Identified confounders	Assessed outcome variables	Results
Spence, 2022, USA	cross-sectional analysis	Special Supplemental Nutrition Assistance Program for Women, Infants and Children (WIC)	social assistance - means-tested scheme	<i>in-kind (food) & in-kind (service/information)</i> existing	<i>family maintenance (food insecurity)</i> general population	participating in at least one / all programs	matching variables: age (under 35), children in household, negative job change, education (at least a bachelor's degree), household size (4 or more individuals), and rurality.	fruit and vegetable intake	using any in-kind federal nutrition assistance programs is not associated with meeting fruit and vegetable intake recommendations
		in-kind (food) transfers, referrals to healthcare and information on healthy eating							
		school meal programs	social assistance - means-tested scheme	<i>in-kind (food)</i> existing	<i>family maintenance (food insecurity)</i> general population				
		in-kind (food) transfers (free school meals)							

Quality of diet > Social assistance - in-kind benefits > Low-income countries

Abay, 2021, Ethiopia	quasi-experiment/natural experiment study	Productive Safety Net Program (PSNP) unconditional cash transfers or in-kind (food) transfers for households whose main income earners are elder or disabled		<i>social assistance</i> existing	<i>family maintenance (income)</i> poor households with at least one child with less than 24 months of age	participation in the PSNP [mixed]	time invariant and observable time-varying characteristics	mother's and children's diet	access to the PSNP does not affect diet quality
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Quality of diet > Other measures > Low-income countries

Abay, 2021, Ethiopia	quasi-experiment/natural experiment study	Productive Safety Net Program (PSNP)	public employment program	<i>general labour and fiscal measure</i> adapted	<i>family maintenance (income)</i> poor households with at least one child with less than 24 months of age	participation in the PSNP [mixed]	time invariant and observable time-varying characteristics	mother's and children's diet	access to the PSNP does not affect diet quality
		labour-intensive public works for six months a year (households with able-bodied members): exempted during the pandemic -> cash-transfer							
		Productive Safety Net Program (PSNP)	other	<i>in-kind (information)</i> existing	<i>education??</i> poor households with at least one child with less than 24 months of age				
		provision of information on maternal and child nutrition practices							

Study ID (first author, publication year, geographical setting)	Study design	Name and description of the social protection measure	Type of scheme	Type of social protection measure and age of scheme	Targeted contingency and population included	Description of intervention exposure	Identified confounders	Assessed outcome variables	Results
Social attitudes and cohesion > Social assistance - in-cash benefits > Middle-income countries									
Londono-Velez, 2022, Colombia	experimental study	NA unconditional cash transfers (actually VAT compensation of a fixed amount for poor households)	social assistance - categorical	<i>in-cash (general transfer)</i> new	<i>family maintenance (income)</i> families under the extreme poverty threshold	receipt of unconditional cash transfer	municipality fixed effects as well as baseline controls for sex, age, victim status, civil status, employment sector, living in an urban area, being a recipient of Colombia Mayor, and SISBEN score.	political attitudes (supports programs for households and firms)	cash transfers had a positive impact on political attitudes (especially support for governmental support programs for HH and contributing voluntary work to the community)
								political attitudes (trust in government)	no effect
								political attitudes (supports quarantine)	no effect
								political attitudes (would contribute money to the community)	no effect
								political attitudes (would contribute work to the community)	cash transfers had a positive impact on political attitudes (especially support for governmental support programs for HH and contributing voluntary work to the community)
								political attitudes (supports evading VAT)	no effect

Study ID (first author, publication year, geographical setting)	Study design	Name and description of the social protection measure	Type of scheme	Type of social protection measure and age of scheme	Targeted contingency and population included	Description of intervention exposure	Identified confounders	Assessed outcome variables	Results	
Strupat, 2022a, Kenya	quasi-experiment/natural experiment study	National Safety net Programme (NSNP)	social assistance - categorical	<i>in-cash (general transfer)</i>	<i>family maintenance (income) & disability</i>	receiving social assistance (either one of the two policies mentioned)	age and sex of the respondent, education level of the respondent, marital status of the respondent, chronic illness and disability in the household, household size, gender of the household head, the household's share of elderly and children, and coverage from other social protection measures, country dummies	trust in government	receiving social assistance after the pandemic is positively related with the outcome but not significantly	
		cash-transfer to older people, people with disabilities, orphans and vulnerable children (expanded via lump-sum payments and increasing level of support)		adapted				households that operate in the informal sector economy	trust in parliament	receiving social assistance after the pandemic is positively related with the outcome but not significantly
		Hunger Safety Net Programme (HSNP)	social assistance - means-tested scheme	<i>in-cash (general transfer)</i>	<i>family maintenance (income)</i>			households that operate in the informal sector economy	inclusive identity	receiving social assistance after the pandemic is positively related with the outcome but not significantly
		cash transfer for vulnerable households (expanded via lump-sum payments and increasing level of support)		adapted					cooperation (horizontal)	receiving social assistance after the pandemic is positively related with the outcome but not significantly

Educational investment > Social assistance - in-cash benefits > Middle-income countries

Londono-Velez, 2022, Colombia	experimental study	NA unconditional cash transfers (actually VAT compensation of a fixed amount for poor households)	social assistance - categorical	<i>in-cash (general transfer)</i> new	<i>family maintenance (income)</i> families under the extreme poverty threshold	receipt of unconditional cash transfer	municipality fixed effects as well as baseline controls for sex, age, victim status, civil status, employment sector, living in an urban area, being a recipient of Colombia Mayor, and SISBEN score.	parental investments in children's education	cash transfers are positively related with investments in children's education, albeit only significant for paying for tutoring (doubling but still very modest increase)
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Notes: Results are organized by unintended negative consequence arising from PHSM implementation, type of social protection benefit, study design, and then alphabetically. Results in green indicate a beneficial association between the policy and the outcome, results in red indicate an adverse association between the policy and the outcome, results in yellow indicate no association, according to the results reported by the single studies. Wording as per original studies. Studies investigating multiple outcomes and multiple policies are reported multiple times under the respective heading.

NA: not available.

Role of social protection in reducing
the burden of public health and
social measures during the COVID-19
pandemic: evidence review

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