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**The role of Social Protection policies in reducing health inequalities**

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# Introduction

Addressing the fundamental causes of health inequalities from a life-course perspective requires policies and programs that are sensitive to all phases of life. Since risk exposure in childhood is particularly impactful and can start an accumulation of negative health consequences, policies that consider a child’s position would be particularly useful in addressing and potentially reducing health inequalities. A distinction can be made between public health policies, health care policies and social policies. In this chapter, the focus is on the latter and especially on Social Protection Policies (SPPs) because they tends to address inequalities early in the chain of causes as they are designed to reduce risks by protecting people against the negative consequences of social disadvantage (UNICEF, 2019). Thus, SPPs should, in theory, level out the unequal distribution of the exposures and vulnerabilities that contributes to health inequalities.

This chapter discusses research evidence on the role of *social protection policies in reducing child health inequalities and does this from a global perspective.* The importance of SPPs in reducing health inequalities was recognized in the highly influential report provided by the WHO Commission on the Social Determinants of Health (Marmot et al., 2008). However, global evidence on the effectiveness of SPPs to reduce health inequalities is scattered, not least because of the large variety of policies, but also because the effectiveness of SPPs is sensitive to context (Moore et al., 2021). Important aspects of context are time and space, cultural, economic, social, and political circumstances and local practices. All of these features may interact with the intervention and thereby potentially produce variation in outcomes. This makes it challenging to synthesize and generalize relevant evidence of SPPs effectiveness in reducing child health inequalities. Most evidence for SPPs effectiveness is found in high-income countries (HICs) – because they have longer standing SPPs systems and higher investment in evaluation, but because low- and middle -income countries (LMIC) have a greater urgency concerning the identification of effective policies, we will also focus on available evidence in LMIC. We acknowledge the wide variety of SPPs and welfare systems across countries and that comparing policy effectiveness between countries directly is therefore complicated. The aim of this chapter is not to identify the SPP design that works best, but rather offer a broad overview of why and how SPPs can improve health from a life-course perspective. We draw on existing studies and focus especially on parental leave as a “case study” to illustrate our arguments.

The chapter starts by clarifying SPPs in terms of its definition, key components, and by highlighting the theoretical pathways as to how it can be understood as a tool to reduce health inequalities. The second part discusses SPPs and child health from a life-course perspective by describing how childhood conditions may be linked to child and adult health and how child-sensitive SPPs can moderate potentially harmful links between childhood conditions and health. The final section focuses on parental leave as a specific example to demonstrate how our theoretical arguments can be applied in terms of its potential inequality reducing benefits.

# Social Protection Policies (SPPs)

## Definition and purpose of SPPs

*Social protection* has been conceptualized in multiple ways by different actors and scholars. There are however commonalities in the use of the concept that allow for a broad definition of social protection as a set of policies and programs (hence, SPPs) that reduces poverty and deprivation by providing resources that help people manage social risks, labor market risks and financial risks related to unemployment, poor working conditions, disease, financial crises, and social exclusion (Esping-Andersen, 1990). Examples of policies and programs that can mitigate such risks are unemployment benefits, pensions, health insurance, fee waivers and cash transfers. SPPs are commonly understood as publicly funded policies provided by governments. In HICs, these policies are most commonly institutionalized in welfare state systems. Here, the idea of “decommodification” is central, meaning that a person’s wellbeing and living standards should not be attached to his or her market performance and that the state should provide key resources such as education and health care to prevent future adverse effects (Bambra et al., 2018, Schrecker and Bambra, 2015). In LMICs, the provision of SPPs more frequently involves international organizations, non-governmental organizations (Barrientos and Hulme, 2009) as well as private actors and community networks. Here, a general rationale behind implementing SPPs is often linked to the perceived need to provide people with measures to cope and mitigate effects of external shocks and to increase resilience, especially among the poorest who are the most exposed to adverse health outcomes (Gentilini and Omamo, 2011, Jawad, 2019).

Moreover, SPPs can be developed with the objective to 1) *prevent* the adverse effects of risk by enforcing measures before the risk has occurred, 2) *mitigate* the impact of a risk by applying measures before the risk occurs (e.g., health insurance), 3) *cope* with the impact of a risk when it occurs (e.g., in-kind transfers such as food transfers during crisis) and 4) *transform* the impact of the risk by addressing the underlying sociopolitical causes that drives poverty and vulnerability in the first place (Holzmann and Jørgensen, 2001, Banks et al., 2017).

## Components of SPPs

The design of an SPP determines the criteria for eligibility and access to the program, which in turn are crucial mechanisms in any relationship between interventions and health inequalities. The design rests on the actors, the scope of the policy, and the financing structure. In terms of the actors, we may differentiate between public, private, organizations, and aid donors. Regarding the scope of the policy, it is important to determine whether there are certain conditions attached to accessing the policy, and to decide whether the target group is *universal* (reaching everybody in the population) or *targeted* (aimed at a population or geographical subgroup). Finally, the financing structure may involve general taxes, employment-based contributions or other financial structures.

We may distinguish between four main types of SPPs: social transfers, social insurances, labor market policies (which may also fall under social insurance policies) and social services (which may also fall under social insurance schemes). First, *social transfers* are often called social safety nets or social assistance. These are non-contributory schemes and are usually provided to the most vulnerable populations (i.e., targeted) to alleviate poverty or to increase access to education, nutrition, and health services. Social transfers can encompass cash transfers, school feeding programs, fee waivers (e.g. removal of school enrollment fees) and in-kind transfers (i.e. non-cash transfers such as food) (Honorati et al., 2015). Second, *social insurance* usually refers to publicly provided insurances to mitigate loss of income due to sickness, unemployment, old age, loss of income due to parental leave, disability and encompass health insurance, unemployment benefits, pension, or allowances. Insurance schemes can be redistributed to reach all people (universal) and are either financed through taxation or on contributions linked to employment. *Labor market policies* include sickness benefits, parental leave, programs to increase employment opportunities (e.g. skills training or job search assistance) and to reduce working risks (e.g. controlled working hours or minimum wage). Finally, *social services*, see for example UNICEF (2019), refer to the provision of basic services such as health care, water and sanitation, education, childcare services, and family support services (Bachelet, 2011, Gentilini and Omamo, 2011).

Universal and governmentally provided SPPs (as compared to targeted SPPs or SPPs provided by non-governmental actors) may be more effective in reducing poverty and income inequality and to improve health inequality (Diderichsen et al., 2012), as exemplified by the successful health outcomes of the Nordic social democratic welfare states up until the 1970s (Bambra, 2021). This argument is based on the assumption that universal policies are more politically sustainable (Diderichsen et al., 2012), less exclusionary and reduce the chances of inequitable, targeted distributions (UNICEF, 2019). Governmentally provided policies, on the other hand, are more likely to be institutionalized and long-lasting compared to the volatility of aid-supported SPPs or SPPs provided by NGOs (Devereux and McGregor, 2014). Although this line of reasoning argument might be valid, some countries also face challenges in the implementation of sufficiently universal and governmentally-supported SPPs. LMICs often face financial constraints and have taxation systems that cannot support a universal scheme, partly as a result of the large informal economy in LMICs that does not contribute to taxes (Marmot et al., 2008). These factors give some explanation as to why universal SPPs are more rare in LMICs and why targeted social assistance programs, often supported by international organizations, donors, NGOs or civil society actors, are more common(Gentilini and Omamo, 2011).

## Linking SPPs and health inequalities

People characterized by high SES have more access to material resources, knowledge, power and social networks than people characterized by a lower SES (Bambra, 2016). ‘Health inequality’ refers to the systematic differences in health which exist by socio-economic status (SES) (usually measured in terms of income, education, occupation or area-level deprivation). Inequalities in health are “*systematic differences in health between different socio-economic groups within a society. As they are socially produced, they are potentially avoidable and widely considered unacceptable in a civilised society*” (Whitehead, 2007). Inequalities in health by SES are not restricted to differences between the most privileged groups and the most disadvantaged; health inequalities exist across the entire social gradient (Marmot, 2006). The social gradient in health runs from the top to the bottom of society and *“even comfortably off people somewhere in the middle tend to have poorer health than those above them”* (Marmot, 2006). People with higher occupational status (e.g. professionals such as teachers or lawyers) have better health outcomes than those with lower occupational status (e.g. manual workers) (Eikemo et al., 2017). Similarly, people with a higher income or tertiary-level education have better health outcomes than those with a low income or no educational qualifications (Bambra, 2016).

SPPs have the potential to reduce or mitigate the effect of poverty and deprivation on health by providing people with more of these resources. For example, SPPs can help people manage social risks, labor market challenges and financial risks by the provision of more monetary resources, but SPPs can also provide better working conditions and stronger labor rights, greater access to social services, education and food. SPPs aim to make these resources accessible to either all social groups (universal policies), or to those who are defined as the most vulnerable (targeted policies). While targeted policies aim to reduce *health* *gaps* between disadvantaged and less disadvantaged social groups, universal policies aim to reduce the *social gradient in health* along the whole social ladder. Common for both targeted and universal policies is that they can affect health inequalities through material-, behavioral-, and psychosocial pathways. In this section we will explain and exemplify how this can be achieved.

The materialist approach explains SES inequalities in health by focusing on income and on what income enables such as access to goods and services and the limitation of exposures to physical and psychosocial risk factors (Bartley, 2017). The main social determinants of health are widely considered to be: access to essential goods and services (specifically water and sanitation, and food); housing and the living environment; access to health care; unemployment and social security; working conditions; and transport (Dahlgren and Whitehead, 1991). By way of illustration, a decent income enables access to health care, transport, an adequate diet, quality housing and opportunities for social participation; all of which are health promoting. Material wealth also enables people to limit their exposures to known risk factors for disease such as physical hazards at work or adverse environmental exposures. Materialist approaches give primacy to structure in their explanation of health and health inequalities, looking beyond individual level factors (agency) in favour of the role of public policy and services such as schools, transport and welfare in the social patterning of inequality.

The behavioural approach asserts that the link between SES and health is a result of differences by SES in terms of health-related behaviour. The ‘pure’ behavioural approach asserts that risky health behaviours are more concentrated amongst lower SES groups due to the concentration of individuals with less self-control, lower responsibility, poorer coping abilities, lower health knowledge, and a more short-term outlook on life: an agency-focused explanation (Mackenbach, 2011). A more structural version of the behavioural model - the cultural-behavioural approach - takes into consideration the role of culture and how different cultural norms can pattern the distribution of unhealthy behaviours (Bartley, 2017). It argues that unhealthy behaviours are more common in lower SES groups where these behaviours represent the cultural norm and are more acceptable.

Psychosocial explanations focus on how social inequality makes people feel and the effects of the biological consequences of these feelings on health (Bartley, 2017). Feelings of subordination or inferiority stimulate stress responses which can have long term consequences for physical and mental health especially when they are prolonged and chronic. Psychosocial risk factors include low levels of control at work or in the community; stigma as well as the ‘stress’ that results from the lived experience of poverty. It is not straightforward exposures to stressors that matter but the stress response that these stressors produce. In this way the model combines both structure and agency. For example, it may not simply be income level or an adequate working environment alone that leads to good health, but rather how good income and good quality work can make people feel, especially in relation to others (Bartley, 2017).

The material-, behavioral-, and psychosocial explanations of health inequalities are core pathways from which SPPs can be understood to influence SDH and health. We also argue that since SPPs provide resources linked to all these three factors, they could be potential moderating policies in the pathways to obtain equal health. For instance, a policy that can mediate the pathway between occupation and health, would be labor legislations by regulating working hours or to set minimum standards for occupational health and safety practices in the workplace. Indeed, the importance of SPPs to health inequalities has led to a further theory of health inequalities: the political economy approach.

The political economy approach combines aspects of the materialist, behavioural and psychosocial explanations with the recognition that the social determinants of health are themselves shaped by macro-level structural determinants: politics, the economy, the state, the organisation of work, and the labour market (Schrecker and Bambra, 2015). This is referred to collectively as the political economy of health (Doyal and Pennell, 1979). Health inequalities are thus considered as politically determined by institutional (in)action (Beckfield et al., 2015). A wide range of research has demonstrated that even within the constraints of unequal societies, the behavioural, material and psychosocial determinants of health inequalities are themselves amenable to public policy interventions. Not all countries have the same levels of health inequality, and political economy approach argues that political choices and resulting public policies are responsible for these differences (Beckfield and Bambra, 2016). In this way, SPPs can be understood to influence the SDH and health inequalities through the material-, behavioral-, and psychosocial pathways.

From a material explanation in the context of SPPs, resources such as income can enable or prevent access to other goods, services and other material risk factors that have an impact on health (e.g. housing). Unemployment has been linked to poor health (Bambra and Eikemo, 2009, Bartley et al., 2006, Jin et al., 1995) and a material explanation for this association is that unemployment leads to a loss of income which in turn reduces access to goods that are essential for good health, such as health services, high standard housing and nutritious foods. The generosity of replaced wages by means of unemployment insurance can reduce the likelihood of poverty (O'Campo et al., 2015).

The material explanation for how cash transfers can improve health equality is similar to that of unemployment benefits: disadvantaged people are provided with material resources (income) to afford access to goods and services that are essential for health. Cash transfers can be efficient in helping households to afford food, school fees and health care through the added income (Adato and Bassett, 2009). Health insurance also exemplifies a material pathway to increasing health equality. Behavioral explanations to health assume that health-related behaviors, such as smoking or dietary choices are associated with SES. From this perspective SPPs can reduce health inequalities through behavioral pathways whereby the program in some way nudges people towards healthier behaviors. The behavioral assumption is incorporated into the design of conditional cash transfers (CCT) as well. CCT are programs in which cash is given if participants comply with certain conditions, assuming that behavioral change is expected from the monetary incentives. Some studies show that CCT influence behavior but have moderate or no effect on change in health (Lagarde et al., 2007, Owusu-Addo et al., 2018), and other studies conclude that CCT are efficient in reducing health inequalities. For instance, Rasella et al. (2013) found that CCT can reduce childhood mortality by increasing health care access and vaccination coverages. However, the debate about the effectiveness of CCT in reducing health inequalities through conditions of behavioral change is ongoing, with evidence of no relative effectiveness of CCT compared to unconditional cash transfers (UCT) in changing behavior. A systematic review by Baird et al. (2014) found that the odds of increased school attendance was equally seen in CCTs and UCT.

Finally, SPPs can also reduce health inequality through psychosocial pathways. This approach illustrates how disadvantage and vulnerability has a psychological impact on people, which in turn can influence health. Poverty and social disadvantage are associated with increased stress, social exclusion, or exposure to trauma or violence, and can cause poor health (Lund et al., 2011). Cash transfers can also improve health by reducing the psychosocial burden on people, as they can increase self-acceptance, hopefulness and autonomy (Attah et al., 2016), including increased social cohesion and civic participation (Owusu-Addo et al., 2018). However, it should be noted that although cash transfers are a widely studied topic in LMICs, the results are mixed. For example, Hjelm et al. (2017) found that cash transfers did not reduce stress and there are continuous concerns that cash transfers might increase stigma and social exclusion resulting from perceptions of unfair eligibility criteria or feeling of shame of receiving cash transfers (Devereux et al., 2011). Psychosocial pathways to health through SPPs are also evident in labor policies. In the case of poor health outcomes from employment conditions stressors, feelings of low control over work, high work demands, insecure employment conditions and the lack of support can lead to increased stress, anxiety and other risk factors for adverse health (Smith et al., 2008, Michie and Williams, 2003, Bambra, 2016). Labor policies such as regulated working hours and skills-training can be implemented to reduce work related psychosocial risk factors and to increase worker´s health.

While SPPs can influence the material, psychosocial, and behavioral pathways towards greater equality in health, it must still be acknowledged that SPPs do not emerge or exist in a vacuum. Instead, the international and national political economy sets the agenda for what SPPs can and cannot do in a country as a result of political and economic priorities and opportunities (Schrecker and Bambra, 2015). Schrecker and Bambra (2015) exemplify the political economy perspective in HICs by describing how national priorities have shaped different welfare state regimes (Liberal, Bismarckian, and Social Democratic) and illustrates how these regimes differ in aspects of provision, access, generosity, eligibility and scope of education, health care, housing, and not least SPPs. These aspects differ in terms of their provision between the three welfare state regimes. Generally, in the liberal regime the state provides little welfare which instead is subsidized to private schemes, criteria to access SPPs are strict and the support given is minimal. The Bismarckian regime is largely contributory based with low redistribution. The Social Democratic regime is more universal and with higher redistribution and more generous support (Schrecker and Bambra, 2015). The aspect of access, generosity, eligibility, and scope of the SPPs provided has been seen to affect population health. Health measures such as infant mortality rate have been shown to differ depending on the welfare regime, with lowest mortality rates in the Social Democratic regimes and the highest in the liberal regimes (Schrecker and Bambra, 2015). Overarching political regimes influence the design of SPPs and the design determines access and availability, which in turn can contribute to increased or reduced health inequalities.

The political economy perspective reveals that it is not SPP design in itself that determines SPP effectiveness, instead effectiveness is highly dependent on the larger political context that sets the agenda for what SPPs can and cannot do, as illustrated by the health effects of different welfare regimes. Departing from the same argument but turning to LMICs, the political economy perspective can explain both the development of an SPP agenda in LMICs and the opportunities and constraints of SPPs. The SPP agenda in LMICs partly emerged from the Asian financial crisis in the late 1990s followed by an acceleration in the 2000s as a response to the observed negative consequences of structural adjustment programs and global crises such as the financial crisis of 2008 (Devereux and McGregor, 2014, Gentilini and Omamo, 2011, Holzmann and Jørgensen, 2001, de Haan, 2014). The SPP agenda was created as a tool for development and to protect people from external shocks and has since developed into a variety of different kinds of policies operating in different domains, protecting people not only from financial shocks, but also from climate change, food insecurity and health insecurity. Aspects of access, generosity, eligibility, and scope of SPPs in LMICs as shaped by the political economy are complex and must be understood both in terms of the global and national political economy structures. For example, globalization has incentivized countries to liberalize and relax their taxation systems to attract foreign investment, resulting in less national funds to be directed to social welfare and SPPs. Furthermore, SPPs in LMICs is generally less institutionalized and involves more non-state actors compared to the welfare state systems in HIC, this creates not only a large variety of SPP types, but also generates a plethora of SPP types that varies in their effectiveness due to the design difference in terms of access, eligibility, generosity.

# SPPs in a life-course perspective

As argued above, SPPs can potentially reduce health inequalities by acting on the SDH through material, behavioural and psychosocial pathways. We also argued that these links are strongly context dependent. In this section, we bring in the life-course perspective. This is essential for two reasons. First, adverse SDH and conditions in childhood are risk factors for poor health in adulthood. Secondly, parental disadvantage is inherited by their children through intergenerational spillover effects. At the end of this section, it should be evident that child-sensitive SPP targeted at parents can reduce child health inequalities and be beneficial for health later in life. The life course approach illustrates the importance of child-sensitive SPP, taking into account the assumptions in life course theory that risks accumulate throughout life, that childhood entails critical and sensitive periods, and that intergenerational spillover effects contribute to the health status of children in adult life.

## Links between adverse childhood exposures and health

Risk accumulates throughout life, where one risk often leads to another which in turn adds or exacerbates chances of experiencing adverse health outcomes later in life. The same is true for protective factors which too can accumulate and instead lower the chances of experiencing poor health outcomes (Braveman and Barclay, 2009). Life-course studies have confirmed the link between childhood conditions and adult health outcomes. It has for example been shown that socioeconomic conditions in childhood are associated with all-cause and cause-specific mortality, cardiovascular disease, obesity, alcohol consumption, smoking and depression (Braveman and Barclay, 2009) and that childhood maltreatment is linked to inflammation (Danese et al., 2007), depression (Li et al., 2016), diabetes, lung disease, malnutrition and vision problems (Widom et al., 2012). The exposure to different types of risks (e.g., environmental, socioeconomic or behavioral) accumulates during a lifetime, so children born into a high-risk environment have greater chances of being exposed to a chain of risk factors. For example, children growing up in low SES conditions compared to higher SES conditions tend to have lower educational attainment, are more likely to be unemployed, to live in inadequate housing conditions and to eat less healthy (Law, 2009), conditions which are known to increase the likelihood of poor health.

Secondly, so called critical and sensitive periods occur throughout childhood, and even during pregnancy (Hertzman and Power, 2003), which is when exposures to risks are particularly impactful for health later in life because exposure during critical periods are often irreversible (Ben-Shlomo and Kuh, 2002, Braveman and Barclay, 2009). Therefore, exposure to the SDH in childhood will have either a protective or harmful impact on health during childhood and in adult life. Studies that have focused on critical and sensitive periods have for example shown links between low birthweight, coronary heart disease, hypertension, stroke and diabetes type 2 in adulthood (Godfrey and Barker, 2001), and it has been shown that breastfeeding is associated with neurocognitive development, obesity and diabetes in adulthood (Chai et al., 2018).

Thirdly, intergenerational spillover effects happen most often when parental risks and parental conditions influence the risk exposure and health of children (Ben-Shlomo and Kuh, 2002). Fetal development is particularly influenced by maternal conditions, especially during pregnancy. A mother who does not have access to nutritious foods has an increased chance of giving birth to a child with low birthweight, and low birthweight in turn is a risk factor for several poor health outcomes, such as type 2 diabetes. Both low birthweight and diabetes could thus have been prevented if the mother had access to better conditions. Similarly, maternal stress can lead to preterm birth (Shapiro et al., 2013) and maternal SES and poverty have been associated with poor infant health (Astone et al., 2007). While neither of these studies specifically considered health in adulthood, this kind of evidence on the link between maternal and parental conditions and child health have led to an increased understanding of the dependency of child health now and in adult life on parental conditions (Simpson et al., 2021).

Evidence from studies on the issues above make it clear that because childhood conditions are a risk factor for poor health later in life, and because parental conditions have a strong influence on those childhood conditions, paying attention to the conditions of parents would be of benefit for the children. It can therefore be theorized that SPPs directed at adults with children during a critical or sensitive period, could interrupt an otherwise potential adverse pathway of risk transferal between parents and children and thereby lowering the accumulation of risks and increase chances of a healthier life.

## Child-sensitive SPPs

As discussed in the previous section, accumulated exposures to physical, psychosocial, and material factors early in life influence not only child health but also health later in life. Many of the adverse childhood experiences are preventable, some through SPPs, which is why it is crucial to develop Child-Sensitive Social Protection (CSSP) to reduce childhood vulnerabilities.

UNICEF has proposed seven principles for CSSP (UNICEF, 2014):

1. Avoid adverse impacts on children and reduce or mitigate social and economic risks that directly affect children’s lives.
2. Intervene as early as possible where children are at risk, in order to prevent irreversible impairment or harm.
3. Consider the age- and gender-specific risks and vulnerabilities of children.
4. Mitigate the effects of shocks, exclusion and poverty on families, recognizing that families raising children need support to ensure equal opportunity.
5. Make special provision to reach children who are particularly vulnerable and excluded, including children without parental care, and those who are marginalized within their families or communities due to their gender, disability, ethnicity, HIV and AIDS or other factors.
6. Consider the mechanisms and intra-household dynamics that may affect how children are reached, with particular attention paid to the balance of power between men and women within the household and broader community.
7. Include the voices and opinions of children, their caregivers and youth in the understanding and design of social protection systems and programs.

The principles above do not necessitate SPPs to be aimed at children directly, and might more effectively be targeted at the household or parents in order to improve the living situation of the child (UNICEF, 2019). For example, the insight that a malnourished mother increases chances of a child of low birthweight (Godfrey and Barker, 2001) implies that SPPs with the purpose of improving the financial status of mothers can lead her to afford more nutritious foods and thus reduce the risk of a child of low birthweight. SPPs targeted at mothers can also improve maternal SES, poverty and reduce maternal stress (Shapiro et al., 2013) thereby reducing the likelihood of adverse childhood experiences and increasing the likelihood of a healthier child.

# Paid parental leave

To summarize, SPPs can potentially reduce health inequalities by acting on the SDH. SPPs can reduce gaps and/or the whole social gradient and their effects can work through different pathways (material, behavioural, and psychosocial), but it will also depend both on where (context) and when (life-course) the policy is implemented. In particular, we have argued that SPPs targeted at parents can be beneficial for child health, both now and later in life. To illustrate this, the next section focuses on a particular type of SPPs, namely paid parental leave, and the evidence on how it can influence child health inequalities.

## Definition and current policy landscape

Paid parental leave (PPL) allows parents to take time away from work following childbirth or adoption while maintaining their jobs and at least a certain share of their income. Though the term may be used for distinctively defining the leave available equally to mothers and fathers, we use it as an umbrella term comprising maternity and paternity leave. PPL policies are typically designed for reconciling competing work and family responsibilities. They aim to promote career continuity and improve family members’ physical and mental health. Seemingly more adult-centric, PPL policies also constitute an essential early intervention to the children’s life. Their benefits on children channel through enhancing parents’ time investments, physical and psychological health, and financial status in the short and long term. Regarding children’s health, such factors are associated with improved physical health as well as enhanced cognitive and non-cognitive development. Hence, besides the immediate health outcomes, PPL policies are likely to improve a child’s later life health through their influence on social determinants such as educational attainment and labor market outcomes. Against this backdrop, PPL policies carry important implications for decreasing health inequalities. If designed as universally accessible, they may generate an equalizing effect between families of different income levels and socio-economic backgrounds.

Over the past two decades, there has been meaningful progress regarding PPL provision, yet further action is still needed to reach universal and equal access. Today, all OECD countries except for the United States entitle employees to some form of national PPL with partial or full compensation (Raub *et al.*, 2018). Globally, all but eight of the 195 countries provide paid leave to mothers, and about half provide leave to fathers (OECD, 2021). Besides this prevalence, the design of PPL policies still varies considerably across countries[[1]](#footnote-1). The duration, availability of job protection, wage replacement level, and eligibility requirements constitute essential aspects of PPL policies. They determine the availability and generosity of the leaves thus influence whether and how long parents can afford to take leave as well as the direction and magnitude of returns.

Whereas the leave duration is critical for the efficient operation of beneficial mechanisms on children’s outcomes, the level of wage replacements, job protection, and eligibility requirements determine the leave’s accessibility. There is sufficient evidence to argue that longer paid leaves reduce the likelihood of adverse health outcomes. Nevertheless, it should be noted that these findings concentrate on the absolute effect of the policy among parents taking up the leave. What about the ones who do not meet eligibility requirements or are eligible but just cannot afford to take the leave due to low wage replacement or lack of job protection? From a social standpoint, high eligibility requirements and low affordability cause disproportionate leave availability to the groups which are already socially advantaged and own the resources to take time off work. Hence, such leaves are prone to exacerbate already existing disparities across socio-economic groups. For instance, the Family Leave and Medical Act in the US provides 12 weeks of unpaid leave following childbirth. Research showed that the take up of leave is lower among the mothers who are younger, lower educated, black and Hispanic because they cannot afford to be out of work (Hawkins, 2020).

Conservative eligibility requirements can also critically decrease the accessibility of PPL for lower socio-economic groups. An employee’s eligibility for PPL can be dependent on conditions as the length of time at an employer, the formality of employment, or the company’s size. The leave policies are often tied to formal employment where workers contribute to the policy through taxation and payments to social security. For instance, a common design in a HICs is the following: the main actor providing maternity leave is the government, the policy is targeted at parents currently in registered employment, and the policy is financed through tax-based contributions and employment-based social insurance contributions. This design is often institutionalized in good functioning welfare states whereunemployed parents are also usually entitled to other benefits. Since the policy builds on employment and accounts for the unemployed to some extent, parents in the informal economy classified in neither of these groups face specific challenges. Evidently, the informal sector is significantly smaller in HICs compared to LMICs. Thus, the severity of the issue increases for LMICs where a significant portion of the population participates in the informal economy and consequently does not have access to paid parental leave.

## How might paid parental leave influence children’s health outcomes?

The PPL’s impact on children’s wellbeing flows through its influence on parental involvement and physical environment during early ages. Hence, previous studies often identified two main channels of impact: time investments and family income. The primary and the most direct channel is the increased time invested in the child due to delay in the return to work following birth or adoption (Ruhm, 2000; Dustmann and Schönberg, 2012). Health economic theories consider parental time as one of the direct inputs of child health capital (Leibowitz, 2005). Accordingly, extra time spent with children may decrease mortality and improve physical health by easing crucial childcare practices such as breastfeeding and vaccination. Moreover, psychologists agree that child-mother interactions enhance cognitive and non-cognitive development, essential for future socialization, academic, and job performance. Attachment theory posits that a secure and caring mother-child relationship built during the first year is critical for developing a better sense of self-efficacy and trust (Bowlby, 1969). Though children should be exposed to other children and adults in further years, the nurturing of the primary caregiver is particularly advantageous during the first year. Parental leave is likely to increase the quantity of these early interactions. Nevertheless, the quality of nurturing still depends on various factors such as the household’s socio-economic status, education level, parental stress, and the relative quality of alternative daycare arrangements.

Another channel that PPL may impact children’s wellbeing is family income. The family’s financial resources are essential for buying child goods (e.g. dietary supplements, books, games) beneficial for physical and cognitive development. Furthermore, household income may influence parental stress and anxiety, thus the quality of parent-child interaction. These suggest that the leave’s impact may differ according to the level of financial benefits offered and the presence of job protection. For instance, during unpaid leave, the family is expected to experience a sudden and temporary reduction in income particularly if they lack enough means (e.g. accumulated wealth, inheritance) to compensate the lost wage. Such reduction in income may extend to the long term if the leave does not include job protection which may cause parents to experience career disruptions or exit the labor market.

## Paid parental leave’s short-term impact on children’s health outcomes

There is ample evidence that more generous PPLs significantly reduce perinatal, neonatal, and child mortality rates during the first year of life. Though these studies mainly focus on European and OECD countries (Winegarden and Bracy, 1995; Ruhm, 2000; Tanaka, 2005; Nandi *et al.*, 2018), their conclusions are also corroborated by the evidence drawn from maternity leaves in LMICs (Nandi *et al.*, 2016). Studying 20 LMICs, Nandi et al. (2016) found that each additional month of paid maternity leave is associated with 7.9 fewer infant deaths per 1,000 live births. Also, these reductions were concentrated mainly on the increase in duration during the post-neonatal period. In contrast, unpaid leaves fail to generate such improved mortality rates. Studies focusing on the extension of unpaid and non-job-protected leaves found no impact on the reductions in infant mortality (Ruhm, 2000; Tanaka, 2005; Staehelin, Bertea and Stutz, 2007; Shim, 2016). Furthermore, focusing on the US, Rossin (2011) found that federally mandated unpaid maternity leave provides minor improvements in infant mortality and premature birth rates only among socio-economically advanced groups. As mothers are reluctant to take the leave without financial compensation, the policy disproportionally benefited those capable of affording the leave, aggravating inequality.

Identifying the exact pathways leading to children’s improved health is relatively complex. Nevertheless, studies demonstrated that generous PPLs increase the prevalence of certain childcare practices associated with improved health, such as breastfeeding and vaccination. Breastfeeding is often associated with protection against sudden death syndrome, leukemia, diarrhea, asthma, and diabetes (León-Cava, Pan American Health Organization and LINKAGES Project, 2002; Ip *et al.*, 2007), better child growth (Giugliani *et al.*, 2015) and enhanced cognitive development (León-Cava, Pan American Health Organization and LINKAGES Project, 2002). For optimal support on an infant’s health, the WHO recommends exclusive breastfeeding of 6 months and continued breastfeeding with complementary foods (World Health Organization, 2001)[[2]](#footnote-2). Nevertheless, previous studies showed that full-time working mothers have a shorter breastfeeding duration than part-time employed or unemployed mothers (Fein and Roe, 1998; Hawkins *et al.*, 2007). Besides, breastfeeding often stops when the mother returns to work (Chen, Wu and Chie, 2006) and women planning on returning to work are less likely to initiate breastfeeding in the first place (Mirkovic *et al.*, 2014; Rollins *et al.*, 2016). PPL policies constitute essential opportunities for achieving the breastfeeding goals indicated by public health agencies. For example, California was the first state in the US to introduce paid family leave in 2004. Huang and Yang (2015) showed that this leave led to increased exclusive and overall breastfeeding through the first 3, 6, and 9 months of infancy. Besides the introduction, the extension of parental leave is also associated with higher breastfeeding intentions, initiation rates, and duration (Baker and Milligan, 2008; Andres *et al.*, 2016; Heymann *et al.*, 2017). While maternity leave policies are relatively less common in LMICs, the existing evidence aligns with the evidence drawn from HICs. In a longitudinal study assessing the effect of paid maternity leave in 38 LMICs, Chai et al. (2018) found that each additional month is associated with an improved prevalence of early breastfeeding initiation, exclusive breastfeeding, and 2.2 months of increase in breastfeeding duration.

Research has demonstrated that the importance of preventative care heightens specifically during the prenatal phase and the first 12 months of the children. In a wide range of countries, they are found to lower the rates of diseases causing child mortality such as influenza, measles, and gastroenteritis (Theodoratou *et al.*, 2010; Simons *et al.*, 2012; Enane *et al.*, 2016). Unfortunately, even when vaccinations are free and low cost, thus accessible by low SES groups, the on-time uptake is not universal. Given that one of the barriers is parents’ working schedules, PPLs may enhance adherence to vaccination schedules. Nevertheless, the conclusions drawn from HICs remain mixed. Numerous studies associated longer paid leaves in HICs with higher on-time immunization uptake(Berger, Hill and Waldfogel, 2005; Daku, Raub and Heymann, 2012; Ueda *et al.*, 2014). Yet, in a longitudinal study of OECD countries, Tanaka (2005) found no significant link between PPL extension (or any other leaves, including unpaid and non-job protected) and immunization coverage for DTP and measles. The author reasoned this result with already high and stable DTP vaccination rates across these countries. Though the number of studies focusing on PPL’s impact on immunization in LMICs is low, existing evidence specifies a significant positive relationship (Daku, Raub and Heymann, 2012; Hajizadeh *et al.*, 2015). Studying 20 LMICs Hajızadeh et al. (2015) demonstrated that the extension of PPL duration enhanced rates of DTP vaccination which is administered several weeks after birth when women might be expected to return to work

## Paid parental leave’s long-term impact on social determinants of health

The SDH are built on the premise that beyond the availability of healthcare, health and quality of life is determined by the conditions in which an individual is born, grow, live, work, and age. Such conditions shape the quantity and quality of resources the individual possesses to satisfy needs and stay healthy (Raphael, 2009). Education and income are the most often cited SDH. Channeling through the individual’s socio-economic status, they both predict health during the life course. A well-paying and steady job secures food, housing, and access to quality medical care. Also, studies on education’s lifelong impact on health showed that higher education is strongly associated with increased life expectancy, reduced morbidity, and healthy behaviors (Raphael, 2009; The Lancet Public Health, 2020). It may increase the capacity for better decision-making regarding one’s health and provide better employment opportunities, thus a chance for upward mobility and better financial conditions (Shankar *et al.*, 2013). From a holistic perspective, social determinants are responsible for most of the entrenched health inequalities between and within countries (Marmot *et al.*, 2008). Therefore, any interventions generating an equalizing impact on the social determinants are expected to reduce health inequalities.

Studies on PPL’s long-term influence on children found that the introduction of PPL or the generous extensions of modest mandates are associated with enhanced educational and labor market outcomes (Dustmann and Schönberg, 2012; Carneiro, Løken and Salvanes, 2015). Carneiro et al. (2015) built a natural experiment exploiting Norway’s introduction of PPL in 1977 through a policy reform that replaced the three months of unpaid leave with four months of paid plus twelve months of unpaid leave. They found evidence for reduced high school dropout, increased college attendance, and increased earnings. Moreover, evaluating three successive PPL reforms in Germany, Dustmann and Schönberg (2012) showed that the first two reforms, which extended 2 months of PPL first to six then to ten months, had a slightly positive impact on educational attainment and earnings. Authors based this on the enhanced time invested in the child and slightly increased income available to mothers. On the contrary, the extension of unpaid leave failed to achieve such positive and significant impacts. Dustmann and Schönberg (2012) saw that the third reform in Norway, which extended unpaid leave from 18 to 36 months, actually negatively impacted educational attainment. The main mechanism was argued to be the loss in household income since they also observed that this reform lowered maternal employment in the medium term.

Besides average impacts on the overall population, does PPL’s long-term influences hold implications for lowering inequality across socio-economic groups? The answer to this remains highly dependent on the context and institutional background. The introduction of PPL may make leave affordable to parents from low socio-economic backgrounds for the first time, hence, benefit their children’s long-term outcomes more than the rest. This equalizing impact may be more evident if the context lacks a subsidized high-quality daycare system. In such cases, unable to afford parental leave and high-quality private care, low SES parents would have to rely on informal care or low-quality private care. For instance, Carneiro et al. (2015) observed that the long-term positive impacts of the introduction of PPL are greater in magnitude for children of less-educated mothers. Whereas fall in dropout rates was only 1.8% for the children of mothers with ten years of education or more, it was 3.6 for the children of mothers with less than ten years of education. Also, regarding college attendance rates, they observed a more substantial impact on children born to mothers with lower education. The authors attributed this equalizing effect to the significance of parental nurturing in the first months and its relative advantage compared to daycare alternatives available in Norway during the late 1970s, namely informal care or low-quality private sector care.

However, the extension of already long PPL durations may aggravate inequality, especially if an affordable and good quality formal daycare option is available (Liu and Skans, 2010; Danzer and Lavy, 2018; Danzer *et al.*, 2020). Focusing on Sweden’s 1988 reform which extended PPL from 12 to 15 months, Liu and Skans (2010) observed no impact on overall scholastic performance but a positive effect for children of well-educated mothers. Given that the main alternative daycare arrangement was formal subsidized daycare, they interpret their results as the effects of shifting time from subsidized formal childcare to subsidized parental leave. They concluded that in contexts where subsidized high-quality formal daycare is available, longer PPLs reinforce the relationship between maternal education and school outcomes. This mechanism is likely to transmit inequalities to further generations. Likewise, Danzer et al. (2020) showed that the extension of PPL generated positive effects only in communities without nurseries; no significant effect was observed for children living in communities where nurseries are available.

The studies of PPL’s long-term impacts are mainly natural experiments exploiting the policy landscape in a single country. Most of them focus on HICs with social-democratic or conservative welfare systems. Therefore, it is not possible to draw conclusions for countries of different income levels. However, their causal inferences may carry implications to a certain extent for LMICs if they share similar institutional backgrounds and PPL policy design.

# Conclusion

Health inequalities continue to be a key public health problem throughout the world. This is not only a matter of health differences between the most vulnerable and the wealthiest; health inequalities extend along the whole societal hierarchy with better health enjoyed in the highest social strata.Thus, they are not *“natural”* or *“inevitable”*; health inequalities are socially distributed and socially determined. This is also why they are modifiable. In this chapter, we have argued how health inequalities can be reduced by means of SPPs, such as social transfers, social insurances, labor market policies and social services that target the unequal distribution of social determinants between and within countries. However, identifying the most effective policies is challenging, partly because of the large variety of social policies, health care policies, and public health policies being implemented at the same time, but also because the effectiveness of SPPs is sensitive to cultural, economic, social, and political circumstances and local practices. What we do know, is that SPPs have the potential to reduce or mitigate the effect of poverty and deprivation via material-, behavioral-, and psychosocial pathways. This can be obtained through universal or targeted policies, in which people are provided with more resources, such as stronger labor rights, greater access to social services, education and food. As we have shown in more detail, child-sensitive SP directed at adults, such as paid parental leave, can greatly improve childhood conditions, which is an important prerequisite for health later in life. If SPPs are implemented as intended, we will come closer to reducing unnecessary health gaps between disadvantaged and less disadvantaged social groups and to reduce the social gradient in health along the whole social ladder across the world.

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1. During the past two decades, the majority of the countries experienced a significant upward trend in the duration of PPL. Today more than half of all countries (54%), meet the ILO standard of at least 14 weeks of paid maternity leave. However, the gap between high- and low-income countries grew considerably. In 1995 the percentage of countries guaranteeing at least 14 weeks of leave were 56% among high income and 28% among low-income countries. By 2015 the contrast reached to 77% vs. 44% (UNICEF, 2019). As per wage replacements, ILO recommends at least two-thirds of regular wages to keep families out of poverty. Most of the HIC countries meet this recommendation whereas the rate falls relatively in LMIC. Presence of job protection is fairly prevalent among PPLs worldwide. 78% of all countries provide job protection guarantee during the entire leave. However, countries of different income levels again show certain divergence in this aspect. Whereas 87% of high income countries guarantee job protection, this percentage falls to 67 among low income countries (UNICEF, 2019). [↑](#footnote-ref-1)
2. However, the existence of causality between breastfeeding and the child's health as well as the persistence of its short-term benefits in the future remains inconclusive. [↑](#footnote-ref-2)