

Review Article

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The negative effects of poverty & food insecurity on child development

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This paper addresses the importance of the first three years of life to the developing child, examines the importance of early childhood nutrition and the detrimental effects on child health and development due to poverty and food insecurity. As development experts learn more about the importance of the first three years of life, there is growing recognition that investments in early education, maternal-child attachment and nurturance, and more creative nutrition initiatives are critical to help break the cycle of poverty. Even the slightest forms of food insecurity can affect a young child's development and learning potential. The result is the perpetuation of another generation in poverty. Conceptualizing the poorly developed child as an embodiment of injustice helps ground the two essential frameworks needed to address food insecurity and child development: the capability approach and the human rights framework. The capability approach illuminates the dynamics that exist between poverty and child development through depicting poverty as capability deprivation and hunger as failure in the system of entitlements. The human rights framework frames undernutrition and poor development of young children as intolerable for moral and legal reasons, and provides a structure through which governments and other agencies of the State and others can be held accountable for redressing such injustices. Merging the development approach with human rights can improve and shape the planning, approach, monitoring and evaluation of child development while establishing international accountability in order to enhance the potential of the world's youngest children.

Key words Capability approach - child health & development - early childhood nutrition - food insecurity - human rights framework - poverty

Despite heightened international efforts to bring more attention to poverty and human development, the most vulnerable children are still the most invisible. These children, aged zero to three, do not show up in mortality records, but poverty and hunger are negatively affecting their development. They survive while living in poverty during the most critical stages of cognitive, social and

emotional development. Any sustained interruption to their nutrition or to their care, if not treated early, can result in irreversible damage to their development. As impoverished young children grow, they will be less likely to succeed in school and more likely to provide inadequate parenting. This will perpetuate the cycle of poverty and poor human development¹. The result is the

perpetuation of another generation in poverty. Undernourished and poorly developed children who are at risk in those first three years of life are at the heart of the grinding social inequalities that drive poverty and truncate human development.

When a child dies every five seconds due to malnutrition-related diseases, it is difficult to focus on surviving children beyond the first line of defense such as oral rehydration therapy or basic hygiene. But the more invisible forms of undernutrition such as food insecurity, and chronic grinding poverty, should be treated just as urgently and deliberately. As development experts learn more about the importance of the first three years of life, there is growing recognition that investments in early education, maternal-child attachment and nurturance, and more creative nutrition initiatives are critical to help break the cycle of poverty. It has been recently estimated that in developing nations, 200 million children (roughly 39%) under age five are not reaching their developmental potential because poverty, malnutrition, high rates of infection, lack of stimulation and education and instability in the home have negative effects on child development. The majority of poorly developed children live in sub Saharan Africa and South Asia². But truncated development due to poverty and food insecurity is also seen in developed countries. Poverty and poor nutrition do not have to be severe in order to negatively affect child development.

The Food and Agriculture Organization (FAO) defines food insecurity as “not having adequate physical, social or economic access to food for an active and healthy life”³. The FAO, the World Health Organization (WHO), and peer reviewed research demonstrate that food insecurity and undernutrition do not have to be severe to have long-lasting consequences. Even the slightest forms of food insecurity (with or without clinical manifestation of malnourishment) can affect a young child’s development and learning potential⁴. This paper addresses the importance of the first three years of life to the developing child, examines the importance of early childhood nutrition and the detrimental effects on child health and development due to poverty and food insecurity.

How the relationship between food insecurity and poor child development is framed and understood is central to how it is addressed, as it shapes the types of interventions that can break the cycle of poverty and improve child health and human development. There is

no singular pathway between food insecurity and poor child development. The relationship is multidimensional and broad encompassing human interactions, socio-economic and political structures, social services, and health care throughout the child’s life. Moreover, while the “proximal” causes of undernutrition and poor child development are lack of access to nutritious foods, maternal depression and exposure to violence, the more “distal” causes of food insecurity are increased vulnerability of mothers and caregivers due to social inequality. All too often, children are seen and measured by medical researchers and economists as if the whole child is only a summation of micronutrients, immunization schedules, or school enrollment rates. On the contrary, these children must be seen as whole human beings with the potential to reach their full human flourishing. Other measures are needed that are participatory and go beyond national administrative records. This paper asserts that poor nutrition and thus poor development should not be seen only in terms of what is measurable such as lack of nutrients, inadequate school performance or low wages later in life, rather undernutrition and poor development should be understood as the embodiment of social inequality. Stunted growth and development are not just measures of a child’s lost potential, but of social injustice⁵. Conceptualizing the poorly developed child as an embodiment of injustice helps ground the two essential frameworks needed to focus our attention on food insecurity and child development: the capability approach and the human rights framework.

The capability approach, developed by Amartya Sen and others, illuminates the dynamics that exist between poverty and child development⁶. The human rights framework, a close kin to the development approach, frames the undernutrition and poor development of young children as intolerable for moral and legal reasons, and also begins to hold governments and other agencies of the State and others accountable for redressing such injustices. Merging the development approach with human rights can improve and shape the planning, approach, monitoring and evaluation of child development while establishing international accountability in order to enhance the potential of the world’s youngest children.

The ecology and development of the very young child

During the first three years of life, child development is dynamic and involves the maturation of interrelated functionings such as cognitive, physical and socio-

emotional capabilities. It is a period marked by rapid physical and neurological development and requires proper nutrition in order for the child to achieve those capabilities so that the child can reach their full potential not only in quality of life, but also in terms of educational achievement and earning potential¹. A child's brain during the first three years of life is rapidly developing through generation of neurons, synaptogenesis, axonal and dendritic growth, and synaptic pruning each of which build upon each other. Any interruption in this process, such as trauma, stress, undernutrition, or lack of nutrients can have long-term effects on the brain's structure and on the child socio-emotional development⁷. Child development is a multi-dimensional process, thus there is currently no one single internationally endorsed population-based scale or measurement capturing children's developmental potential⁸. Child development depends on the synergistic effects of environment, nutrition, responsive stimulation and social structures that work to nurture proper child development. Development depends on adequate access, quality, preparation and consumption of healthy foods, interactive bonding and emotional and intellectual nurturance from caregivers, supportive social and educational structures, and community, economic and political support¹. Child development specialist Urie Bronfenbrenner explained child development in the context of an ecological perspective combining aspects of developmental psychology and sociology, where a child's development is dependent upon "mutually shaping" relationships between several levels of influence^{9,10}. At the most proximal level is the "microsystem" that includes a child's biology and interpersonal interactions between the child, family and friends - these are the most prominent relationships in an infant and toddler's life. The broader system that encompasses these interpersonal interactions is the mesosystem and involves the child's relationships within the context of multiple settings of family, school and work. Finally, the broadest "exosystem" includes the larger social system such as economic forces, cultural beliefs and values, and political processes that have an impact on child development. Each level of this system interacts with the others to assist or hinder a child's development over time. The ecological model allows policy makers, researchers and advocates to address the dynamic interpersonal, institutional and political processes affecting the development of the young child¹¹. Through this model, it is possible to see how deprivation within one aspect or level will have a ripple effect on the rest of the variables and systems at play in a child's life.

Nutrition-related causes: Child development is dependent on multiple factors beyond food and micronutrients, but we cannot ignore the centrality of good nutrition. Nutrition provides the building blocks for brain development. Thus, it has a strong influence on cognitive and fine and gross motor skill development, educational attainment, and psychosocial disorders and is linked to a child's nutritional status along with linguistic and social development and self-regulation⁷. Adequate nutrients are required to support this period of rapid growth and development and therefore even mild nutritional deficits during critical periods of brain development during infancy and toddlerhood could be detrimental^{12,13}.

Poor child development begins *in utero* when a child may be exposed to intrauterine growth restriction due to the undernourishment of the mother. Poor uterine growth is indicated by low birthweight (infants weighing < 2,500 g at birth) and is associated with poor development such as lower cognition scores, decreased activity and expressiveness, poor language development, and behavioural difficulties. Beyond intrauterine growth restriction, poor nutrition early in life also contributes to stunting, defined as height for age below two standard deviations of mean reference values for normal growth. Contrary to dominant theories on stunting, distributions of stature are not primarily based upon genetic transmission, but are more dependent on nutritional adequacy in early life. It has been demonstrated that adequate income and socio-economic position help decrease rates of stunting¹⁴. Thus, stunting is now considered to be an indication only of severe nutritional deprivation. Stunting by age two or three has been shown to be associated with cognitive deficits later in life, poor school achievement and high rates of school dropout^{15,16}. Not only is stunting associated with poor cognitive development and low school achievement but also, in longitudinal studies, it is shown to negatively impact behaviour, and be associated with poor social relationships development and maintenance skills and poor attention. Conversely, intervention studies that include nutritional supplements have a positive impact on stunting and on most developmental indicators. While these associations are found between stunting and undernutrition at the gross level, deficiencies in micronutrients such as deficiencies in iodine, iron and zinc have each been related to developmental risk and poor cognitive function¹. Overall, gross reduction in quantity, as well as in quality of food affects a child's growth potential, susceptibility

to micronutrient deficiency, and ability to develop adequately.

Beyond nutritional deficiencies, high rates of infectious and diarrhoeal diseases due to poor sanitation and toxins in water supplies have devastating effects on the development of young children. Some infections such as malaria can directly cause neurological and cognitive damage, while others have indirect effects through poor nutrition, where loss of nutrients can lead to apathy, poor absorption and less uptake of micronutrients¹.

The relationship between poverty and child development is not only dramatic in developing nations, it is also a major concern in developed nations where there are pockets poverty, and health disparities related to race/ethnicity, gender, income and education. In the United States there are extraordinary ethnic, racial and gender disparities in the rates of food insecurity. The United States Department of Agriculture estimates 11 per cent or 12.6 million households (35 million people) within the US experienced food insecurity during 2005. Among households with children younger than six years of age, the rate of household food insecurity was one and a half times higher at 16.7 per cent (2.94 million households, 12.79 million people). The relationship between food insecurity and children's health, behaviour, and development varies by age¹⁷. Among US children between three and eight years of age, food insecurity has been associated with lower physical function¹⁸, poor academic performance, and less adaptive psychosocial functioning¹⁹. Among children less than three years of age, food insecurity was found to be associated with caregiver reports of poorer infant health and increased likelihood of hospitalization²⁰. Compared to infants and toddlers in food secure households, infants and toddlers from food insecure households had a significantly increased odds of developmental risk²¹. Clearly, in developed countries such as the US that have infrastructure, welfare support programmes, higher incomes and overall higher educational attainment, the ill effects of undernutrition manifest because of these disparities.

Child health in the United States relative to other developed nations is one of the worst in the developed world. The 20 developed nations, the US ranks very low (18th out of 20 overall) due to very high rates of infant mortality, poor child health, and low rates of child safety and security²². Disparate rates of poor child health occur in the context of inequality. In the United States

the rates of food insecurity may seem low at 11.9 per cent compared to developing nations, but the disparities among groups are stark. Households with children under age 18 yr old experienced food insecurity at twice the rate of all other households. For African American and Latino children, the rates are almost three times that of children in white households (31 and 30% vs. 11.3%)¹⁷. Immigrant households have been shown to have much higher rates of food insecurity than US citizen households²³⁻²⁷. For instance, infants and toddlers born to Mexican citizens have a child food insecurity prevalence rate five times that of children born to Native US parents²⁸. The group that suffers the most from food insecurity and hunger is female-headed households. Across the United States, approximately one-third of these households experienced food insecurity, and many times children are not shielded from nutritional deprivation¹⁷. When women experience food insecurity their mental and emotional states are altered, which can negatively affect their child's development.

Psychosocial risk factors: Adequate nutrition is not enough to promote optimal child development. Child development is related to parental education, and is also dependent upon cognitive stimulation, sensitivity and responsiveness, and attachment with the caregiver⁷. This is true in developed and developing countries. Research on mothers of very young children between ages 0-3 yr demonstrates that maternal depression is strongly associated with high probability of poor development, and behavioural and emotional problems in children²⁹⁻³³. These outcomes are generally due to disordered parent-child interactions, ineffective parenting, or to marital distress^{34,35}. The mother may have poor nutrition because of poverty, low educational attainment, low wages, and her increased vulnerability. While child development is dependent on intrauterine environment, it is also highly dependent on a symbiotic relationship between the mother, the child and the social, physical, cultural and political environment. A child's food insecurity status and developmental trajectory is thus contingent dependent upon the adults around them.

Environmental risk factors: Although undernutrition and poor development are a type of structural violence in themselves^{36,37}, truncated child development is also associated with exposure to community and domestic violence. For instance, in South Africa, children exposed to community violence demonstrated higher levels of attention problems and depression^{38,39}. Exposure to violence also affects child development, as trauma can cause deep emotional scars and physically truncate brain

growth^{40,41}. Early childhood trauma caused by child abuse and neglect, has severe consequences for the child, affecting the basic template or brain structure necessary for development⁴². As the child grows into adulthood, traumatic experiences present through elevated risk for chronic diseases such as diabetes, obesity, and depression and increased risk for drug and alcohol addiction⁴³.

Interventions to address child hunger and food insecurity

Interventions that have the most success with the greatest impact and least amount of investment are those that provide direct services to the young child, and combine family and center-based components^{44,45}. Evaluations of child-focused services that are center-based and emphasize early learning experiences through pre-schools in both developing and developed countries demonstrate improved cognitive development, higher school enrollment, and higher scores in mathematical and language achievement. Long-term effects were less welfare dependency and lower crime rates^{46,47}. Research has also found that parental involvement with either parenting groups or home visits along with child care early intervention programmes has a greater synergistic effect on long term outcomes^{48,49}. Comprehensive programmes such as the Integrated Child Development Services (ICDS) in India reach a large number of young children incorporating important components of early intervention services along with parental education⁴⁹. However, the long term effects may not be as substantial because of low funding, and lack of training and work overload among community workers⁴⁹. The World Bank sponsored programmes in Uganda, Bolivia and the Philippines, while broad and cross cutting in their reach to parents, did not show significant improvement in child development, because they lacked direct services to children⁵⁰. Other poverty reduction programmes such as “*Oportunidades*” in Mexico where cash transfers are made to families who comply with incentives to enroll their children in early childhood education has shown moderate effects on gross motor development, but no proven advancement of cognitive development, most likely due to lack of direct training and guidance to parents on providing social and cognitive stimulation⁵¹. Finally, younger (2-3 yr vs. 4-5 yr of age), more vulnerable children demonstrated the highest potential for improvement with early childhood intervention programmes. The potential for improvement, especially for the younger more vulnerable children, also translates into cost savings in

terms of health care cost savings, savings in academic achievement and skill formation, and increased income^{52,53}.

The goal of early childhood interventions is to protect children from the negative effects of undernutrition, and lack of nurturance in the family. It is generally hoped that such interventions on the proximal causes of poor nutrition and development will, over time, have an effect on the more distal causes of poor nutrition, such as low maternal educational attainment and earning potential. Without simultaneous attention to the root causes of undernutrition and poor development such as social inequality and ethnic and gender discrimination, it is likely that for many generations to come poor child development will continue to be perpetuated.

Capability approach and human rights applied to food insecurity and child development

While the millennium development goals of cutting hunger and poverty in half by 2015 are fast approaching, development experts are calling for stronger support to build infrastructure and programmes to address child development and food insecurity. The two most dominant frameworks being utilized concerning child development are the capability approach and the human rights framework.

Capability approach: The capability approach takes a broad view of human development to include the concept that human beings (not economies) are at the center of development. In the international arena, there has been an overall acceptance of Amartya Sen’s portrayal of poverty as the lack of access to and agency to attain fundamental freedoms. In other words, poverty is “capability deprivation”⁶. Functionings are the fundamental things that people do, such as nourish oneself or nourish others. Capabilities consist of the ability and freedom to achieve functionings in order to lead a life one has reason to value. Capabilities include five essential freedoms: (i) political freedoms, such as the freedom to participate in multi-party democratic elections, or to criticize state authorities, (ii) economic facilities, including the opportunity to use economic resources or entitlements, (iii) social opportunities, people’s ability to access health care, to gain an education, (iv) transparency guarantees, such as the ability to trust others and to know that the information one receives is clear and honestly disclosed, and (v) protective security, or, social protections for vulnerable people that prevent deprivation⁶. While these are

fundamental freedoms that help people flourish, economists, philosophers, and development specialists are still defining and discussing ways to measure capabilities.

The goal of human development is to expand freedoms. In the same vein, child development is also a form of expanding freedoms, by ensuring that a child's brain develops well, that a child is nurtured in a supportive and loving environment for their social and emotional growth, and that they can receive cognitive and social stimulation so they succeed school, which helps them lead a life they have reason to value. These freedoms are not static at a point in time, but need to be expanded and available throughout the lifecycle for children and adults. It also must be recognized that the capabilities and freedoms that "adults enjoy are deeply conditional on their experience as children"⁶.

In order to take a broader, lifecycle and human development approach to child development and food insecurity calls for a particular set of measures that go beyond basic income and nutrients and includes educational attainment, access to health care, and other indicators of quality of life. One such set of measures is the "Capability Poverty Measure" (CPM) that was eventually integrated into the United Nations Development Programme Human Development Reports in 1996⁵⁴. This index supplemented data derived from income poverty measurements and complemented the Human Development Index (HDI). The CPM data considered the percentage of people who lacked minimal essential human capabilities. Three basic capabilities are measured with an overall emphasis on women: Nutrition and health measures the proportion of children under the age of five who are under weight. Safe reproduction measures the proportion of births that were unattended by health person. Education level measures the degree of female literacy. While these measures have conceptual merit, they have been criticized because they are extracted from national administrative data, rather than from local sources, which may mask disparities at local levels^{55,56}.

Measuring nutritional deprivation itself is a complex endeavour and does not simply rely on statistics on stunting or weight. Proper nutrition is based on a series of necessary capabilities such as health care and education. In the same way that poverty is not simply understood as lack of income, hunger is not simply about the lack of food availability. It is, rather, as Sen and Drèze suggest, a sign of "entitlement failure."

Entitlements are ways through which people can secure their means of subsistence. Such entitlements might include access to jobs with "living wages," ownership of land, social security/unemployment insurance, and insurance for health care. Entitlements are what the "law guarantees and supports" they are not ideas about the things to which people are morally entitled⁵⁷.

According to Sen and Drèze, the question of hunger becomes a question of "who has control over what". The loss of entitlements indicates a loss of control and command over resources that are necessary for maintaining a healthy diet. Proper nutrition has to do with what states and organizations are doing to ensure access and effectiveness of goods and services essential for human wellbeing. When these structures fall apart, people go hungry. Loss or lack of access to such entitlements means lack of access to employment, safe and affordable day care, or nutritious food. The capability approach to hunger consists of three major concepts: (i) the variation in nutritional requirements between individuals and groups, (ii) the varying ability to access and manage nutritional functionings, and (iii) the multiplicity of functionings that are related to food and nutrition⁵⁷.

While nutrition assistance programmes are available, especially in the developing world, not everyone can access them successfully or benefit from them. Drèze and Sen refer to this as the ability to command commodities, and the varying abilities of functioning offering an example using a pregnant woman to illustrate their point. A pregnant woman may be barred from working in certain contexts, or may be prohibited to work altogether, yet she has greater nutritional needs. Because of this her functioning to provide and nourish herself has been decreased through loss of agency. Thus, though work is supposedly available, she may not be able to access work in order to pay for food items she needs. As Sen and others suggest, one can still be able to earn an income, but may not have the capability or agency to convert that income into a functioning-*i.e.* purchase food, or disease free living, or assured mobility. In the developed world, this concept applies to low-income neighbourhoods, where nutritious foods are difficult to attain. In turn, this negatively affects nutritional intake^{58,59}.

The ability to transform an available commodity such as food stamps, into a functioning, such as adequate nutrition, is also illustrated by varying capabilities within a household. Intra-household variability is an

important consideration, especially concerning gender dynamics and nutritional needs. In some instances, women eat the least in the household because of perceived lower social status⁶⁰. Indeed, Sen suggests that poor nutrition of women and girls is strongly linked to a shortened life span. In India alone, he calculated the premature loss of 100 million women due to gender discrimination in the home and in national policy⁶¹.

Finally, adequate nutrition is dependent upon other non-food items and functions such as clean drinking water or running water, education and health care. Drèze and Sen⁵⁷ describe the complexity of diarrhoea and gastrointestinal distress as they relate to nutritional deprivation. These illnesses cause major health problems that must be treated with nutrition, in addition to medication and access to a physician. With each new infection, a child may lose more weight, lose more nutrients and become more susceptible to the next infection, increasing the risk of poor development. Thus, health care and adequate nutrition are entangled in a symbiotic relationship. This is also true for adults. As stated above child food insecurity and hunger are strongly associated with poor mental health and disability in parents. To illustrate, if a woman lacks access to mental health care, her prospects of finding and keeping a job are diminished resulting in a decreased level of functioning, which in turn potentially diminishes her capability to purchase food, and threatens the quality of her nutritional intake as well as that of her children^{62,63}.

The human development approach casts its net broadly in the types of “capabilities” it seeks to measure; yet critics assert that the subject of inquiry is still at an individualistic level. Thus, mother and/or child are decontextualized from the larger political and social contexts of classism, racism and discrimination. In other words, the development approach neglects the context of a power differential - how power is produced and reproduced. The criticisms primarily focus on describing the political and ideological differences among countries regarding socialism and capitalism. Navarro suggests that socialism has been perceived to have had more success in attending to the social and economic rights necessary for expanding the freedoms for human development⁶⁴.

Human rights framework: While the capability approach to food insecurity and human development bring attention to “who has command over what” the human rights framework adds the dimension of who is

responsible for social and political contexts that have the most impact on human health and wellbeing. The advancement of thinking on the health and human rights connections emphasizes the importance of addressing accountability and responsibility to respect, protect and fulfill human rights. The human rights framework is the lens through which we view human wellbeing as it is described in the articles of the Universal Declaration of Human Rights (1948), its associated legally binding covenants, and general comments created by UN human rights committees and special rapporteurs⁶⁵. The original special rapporteur on the right to food strongly concurs with experts on nutrition that hunger should not simply be viewed as affecting someone at a particular life-stage, but as an experience affecting the human family across the lifecycle. Using the lifecycle approach, undernutrition for children early in life “handicaps” societies for decades, which focuses special attention to the rights of women and children, demanding a broad economic, social, political and human development understanding of poor nutrition⁶⁶.

Economic and social rights are the human rights most central to child development and food security. Food insecurity and child development can be addressed using the human rights framework as it pertains to *health* developed by the pioneering work of Jonathan Mann, Sofia Gruskin and Daniel Tarantola, and Paul Hunt, the current UN Special Rapporteur on the right to health^{65,67-70}. The human rights framework focuses on fundamental human rights and addresses state obligations to respect, protect and fulfill human rights as they relate to (i) vulnerability at the individual and social level, (ii) the health effects of policies and public health programmes, and (iii) potential discrimination that causes vulnerability or that is embedded in policy and programming. A rights framework also addresses venues for greater public participation and on ways to hold state actors⁶ accountable for respecting protecting and fulfilling rights⁷¹.

What makes the health and human rights framework different from the capability approach is that human vulnerability is not seen only in terms of capabilities or lack of freedoms, but in terms of a person rights and state obligations. It is perhaps a broader view even still than capabilities, because it is a way of indicating a process of “cumulative conditions” shaped by economic, political and social conditions, that vary over time and space as individuals, households and communities fulfill their needs and invest making a life

meaningful⁷². Unlike the capability approach, which relies on static measures of nutritional status or enrollment in school, vulnerability is considered to be dynamic describing how people move in and out of food insecurity, or how children develop^{73,74}. The human rights framework can be used to draw attention to vulnerabilities due to violations of rights, as well as seek to find ways through which the state is obligated to reduce vulnerability through respecting, protecting and fulfilling rights.

Vulnerability can be understood as a dynamic multifaceted experience that demands a multi-dimensional approach that views food insecurity as demanding social supports that go far beyond income and food supports to ensure education, health and welfare^{66,75-79}. Women and girl children are especially vulnerable to food insecurity and to socio-economic processes that may cause food insecurity. Thus, the right to food is also related to the ensuring the full realization of the rights of women^{66,77-78}. These rights in the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW) (1979) include demand for equal pay and protection against discrimination, as well as for their highest attainable standard of health. If a woman received better training, more emphasis on schooling, she will also receive better pay, and will thus have reduced vulnerability to economic shocks or lack of a living wage⁷⁷. If women's rights are not protected by the state, and cultural attitudes toward women are not shifted as a result, gender discrimination will continue to perpetuate poor child development through women's lower earnings, lower skill sets, poor nutrition, and lack of command over necessary resources.

In addition the rights of women the rights of the child and the right to food are essential. The International Convention of the Rights of the Child (1989), signed and ratified by almost every participating country in the UN, has several articles that assert the right to health, nutrition and child development. For instance, Article 27 of the Covenant asserts "States Parties recognize the right of every child to a standard of living adequate for the child's physical, mental, spiritual, moral and social development"⁸⁰. The covenant also asserts that parents and other caregivers have primary responsibility to care of the child, and states parties should also assist parents to implement this right, including providing assistance such as nutrition, clothing and housing.

The right to food, while strongly asserted in Convention of the Rights of the Child to protect children

from malnutrition and hunger, has also been addressed in the International Covenant on Economic Social and Cultural Rights (ICESCR), one of the two central treaties that emerged from the UDHR⁶⁶. The right to food is the "right to have regular, permanent and unobstructed access to quantitatively and qualitatively adequate and sufficient food [that ensures] a physical and mental, individual and collective, fulfilling and dignified life free from anxiety"⁶⁶. In addition there have been several international summits and official declarations regarding the right to food. The most influential summit was the Rome Declaration on World Food Security in 1996, where all countries (except the US and Australia) affirmed and agreed that food is a basic human right, and pledged to cut world hunger in half by 2015. These international consensus activities have provided opportunity for the international community to participate in decision-making around hunger and to affirm their commitment and accountability.

Accountability

There is no greater offense however, to continue to assert basic human rights and fundamental freedoms if there is not a clear line of accountability. The capability approach frames food insecurity as entitlement failure and poor child development as lack of freedom. The human rights framework views food insecurity and poor child development as a series of experiences that are rooted in violations of fundamental human rights. Thus, it is impossible to view poor child development as anything but failure of society to uphold its duties to its children. The fact that the majority of children suffering from food insecurity and poor development are in the developing world, and that everywhere it is children of lower classes and marginalized societies that suffer, reveals the unsettling fact that food insecurity and truncated child development are a form of intentional neglect by the more powerful. As Josue de Castro long ago asserted, "hunger is man made"⁸¹, who then, can we hold accountable to unmake hunger?

Accountability must be attached to the way food insecurity and deprivation are measured and understood. The millennium goals of cutting the world's hunger and severe poverty rate in half are a positive goal. But when is time to measure the goals it will also be critical to consider the financial, time, and intervention investments made by international leaders and the investments made in social and economic rights for women and children. Clearly, food insecurity and poor child development are contingent on parental control

and capability and is dependent on the child's experiences. Thus, while primary and proximal responsibility for a child's development lies with the parents, if the parents have no social, economic and political support, they will fail, and that failure should rest on the conscience of the state and international community and thus inspire them to make sincere investments in child development programmes.

Investments in the very young and their parents together, with direct services provided to the child are the types of interventions that are most successful. Members of the International Child Development Steering Group, and other child development researchers have already made several recommendations for improving child development in policies and programmes, and in the nature of our research⁵¹. Central recommendations are to implement early child development interventions in infancy through families and caregivers, and provide group learning experiences between the age of 3-6 as a poverty reduction strategy. The other is for researchers to define a core set of globally accepted measures of indicators of child development for monitoring, planning and assessment⁵⁰. In addition, capability measures need to demonstrate evidence of effective legislation to invest in early childhood education, support systems for parents of young children, and food assistance and income support programmes for families. These types of measures would draw more attention to the political will to address human development. While legislation exists it does not necessarily guarantee a family has the capability to achieve such basic functions, which is why refining and improving existing measures at the population level are critical to breaking the cycle of poverty thereby improving human development. At the international level, it will take more targeted efforts on the United Nations to hold governments that have signed and ratified associated treaties to be accountable with these capability benchmarks, but also with legislative and financial benchmarks related to early childhood development. Together, improved measures and targeted interventions will help the most vulnerable children to develop to their full potential. Their improved development will have broad reaching, long-term effects. These very young children, who tend to be the most invisible and closest to the breast, hold the key to ensuring human development for all people.

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