Child Indicators Research (2024) 17:2175–2217
https://doi.org/10.1007/s12187-024-10148-z

Socioeconomic Factors Determining Multidimensional Child Poverty Groups in Central America: A Measurement Proposal from the Wellbeing Approach Using a Comprehensive Set of Children's Rights

Yedith B. Guillén-Fernández[1]

Accepted: 2 June 2024 / Published online: 31 July 2024

Abstract
This article aims to show that multidimensional child poverty (MCP) is determined by several socioeconomic factors that influence the formation of stratified groups of poor children under five years of age living in Central America. This study advocates for a comprehensive set of children's rights with the purpose of addressing the different facets of child poverty from the perspective of child well-being, in order to estimate the incidence of MCP, by including multiple childhood deprivations and socioeconomic determinants. Child-specific indicators and household deprivation indicators are considered in the estimation of MCP. The study also states that child poverty is a complex concept, which includes the various types of deprivations experienced by children in the Central American societies and their deprivations are considered as the denial of children's rights. Therefore, the MCP is estimated based on a conditional latent class analysis that includes not only manifest deprivation variables, but also socioeconomic determinants that help to better predict the incidence and probabilities of children being multidimensionally poor according to different poverty strata. The socioeconomic factors that show high risks of MCP are rural areas, indigenous children, young mothers and low levels of education attained by the head of the household, among others. One of the reasons to investigate the MCP for Belize and El Salvador is because there are few studies that address this problem for these countries and this research sheds light on the characteristics of early childhood poverty. The results indicate that the incidence of MCP is 49% in Belize and 76% in El Salvador. The research work concludes that the International Rights of the Child provide the opportunity to implement comprehensive social policies in Central America to eradicate child poverty.

Keywords Multidimensional child poverty (MCP) · Children's rights · Child-specific indicators · Conditional latent class analysis (CLCA) · Poverty strata

Extended author information available on the last page of the article

1 Introduction

The socioeconomic effects of the Covid-19 pandemic have implied greater exclusion, inequality and poverty in several countries, especially in the least advanced ones. Children have the highest incidence of poverty in the Latin American region and the health emergency has aggravated it even more; because children are the age group of the population with the least possibilities of accessing vaccines, especially in poor countries, and their social deprivations have also deepened. Additionally, children in Central America are at greater risk of nutritional deficiencies and are more vulnerable to health care and social security deprivation. The reason is due to the large number of families that have lost their jobs or are enrolled in the informal sector. There is also low attendance at daycare centers and high levels of school dropouts, which in some cases has forced children to abandon compulsory education, given the contingency measures due to COVID-19 (ECLAC, 2020; ECLAC-UNICEF, 2020).

The international community has been aware of this emergency and aspires to join efforts for the development of the Central American region. The Economic Commission for Latin America and the Caribbean (ECLAC) created a development plan called "Strategy 2020" that includes the SICA[1] countries, which are Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panama, Belize and Dominican Republic (ECLAC, 2007). Another effort is the Comprehensive Development Plan for El Salvador, Guatemala, Honduras and Southeast Mexico, which aims to address the structural causes of migration from Central America, due to poverty, inequality, unemployment, crime and the impact of natural disasters,[2] through the improvement of economic activities and the promotion of sustainability (Mora-Téllez, 2019; ECLAC, 2021). More recently, ECLAC (2020) successively developed the '2030 Strategy' at the beginning of the COVID-19 pandemic to guide the sustainable development related to the energy sector, supported by the Paris Agreement on climate change and the Central American Alliance for Sustainable Development (ALIDES). All these commitments are also associated with the Sustainable Development Goals (SDGs) to substantially eradicate poverty.

The post-pandemic era has also put the Central American region in an emergency to eradicate multidimensional child poverty (MCP). This is one of the reasons why Belize and El Salvador have been chosen as a sample of countries with the purpose of analyzing the MCP in this study. Another reason is that both show the highest child poverty figures in Central America. According to some international data availability from ECLAC & UNICEF (2010), Salvadoran children have experienced the highest levels of MCP in the Central American region, who presented in 2004, an incidence of approximately 87% of children aged 0 to 17 years. Furthermore, El Salvador showed the highest incidence of mild and severe childhood deprivation (80%)

[1] SICA, by its Spanish acronym, is the Central American Integration System, which is the economic and political organization of Central America since 1993 (ECLAC, 2007).

[2] Rivas-Valdivia & Sánchez-Vargas (2023) show that one of the aspects that determines low economic development in Central America are natural disasters and, sometimes, they push economies into poverty traps.

in Latin America.[3] More recent studies show that 59% of the poorest households are composed of children aged 0–17 years in El Salvador (UNICEF, 2015) and the poverty rate for the same age group is 42% in 2020 (ECLAC, 2022).[4]

However, few studies have been published showing estimates of child poverty and there is a significant paucity of up-to-date surveys to capture the analytical dimensions of MCP in these countries.[5] In the case of Belize, the most recent figures are shown in a report presented by the Government of Belize (2014)[6] where it is mentioned that children under 15 years old were the age group with the highest incidence of poverty in 2009, 50%, and the indigence rate was 21%.[7] However, these child poverty figures are based on the income poverty measure. From the perspective of some scholars, this is a limited view to address the lack of means to meet the necessities of life (Titmus, 1962; Townsend, 1979; Ringen, 1985; Gordon, 2010). On the other hand, UNICEF (2023) reports that 58% of young people under 18 years of age in Belize present multidimensional poverty and the dimensions of poverty included in their study are adequate nutrition, drinking water, adequate sanitation, adequate housing and access to education and information. These figures are updated, however, there are no figures to monitor poverty in early childhood, in the ages of 0 to 5 years.

Furthermore, a common problem in measuring child poverty is analyzing it through the lens of household indicators, but not through the lens of child-specific deprivation indicators (Gordon, 2010). This study includes individual deprivations of children once the United Nations Economic Commission for Europe (UNECE, 2020) recommended that "*countries should use available datasets, such as Multiple Indicator Cluster Surveys (MICS) or household surveys to develop child-specific and life-cycle adapted multidimensional poverty measures that reflect the needs of children at different stages of development*…" (UNECE, 2020, p. 201). This article relies on the wellbeing approach devised by Bronfenbrenner and Morris (1998) to estimate the MCP, for which a latent concept is constructed. This concept is integral to this study because it includes child-specific dimensions and indicators, such as child development, nutrition, and health care services, based on information available in the MICS[8] (Multiple Indicator Cluster Surveys). Additionally, Bronfenbrenner & Morris' ecological framework allows us to include socioeconomic determinants that influence children's environment and their development. Likewise, child poverty seen from the perspective of well-being implies heterogeneity. This means that a child rights approach can be understood in an integrated manner with the view of well-being

[3] There are no either child poverty figures for Belize in the ECLAC-UNICEF (2010) report nor in the Social Panorama of Latin America and the Caribbean 2022 (ECLAC, 2022).

[4] ECLAC (2022) uses an income poverty rate based on updates to the food basket and applying the Orshansky coefficient to obtain a full normative basket with food and non-food items for every country.

[5] Few studies have been published, such as the ECLAC-UNICEF report (2010) called "Child Poverty in Latin America and the Caribbean", which shows MCP figures for several countries; however, the aforementioned report does not provide information for Belize on MCP, only for malnutrition.

[6] Figures of Belize are shown based on low income.

[7] The poverty rate was calculated using the monetary value of budget standards, called "the Minimum Food Basket", which also includes non-food expenses (Government of Belize, 2015).

[8] The MICS surveys are available at https://mics.unicef.org/surveys

(Ben-Arieh et al., 2014). In this sense, a set of comprehensive deprivation indicators based on the Child Rights are included to measure MCP, based on the criterion that there is a general agreement that "*indicators, their measurement, and use are driven by the universal acceptance of the CRC*[9]" (Ben-Arieh et al., 2014: 13).

Moreover, it is important to show whether a country's population experiences different strata of poverty. Several scholars have shown the importance of also estimating not only the incidence of poverty, but also its deep, since the strata account for distances, disparities or inequalities in children's lives (Delamonica & Minujin, 2007; Alkire & Foster, 2011; Stewart, 2013). This also implies a much more complex problem that must be addressed not only with a comprehensive social policy, through the implementation of universal social protection schemes to guarantee rights, or if it is also necessary to implement specific policies to alleviate extreme poverty in children. Villanger (2008) advocates for universal policies as the government provides free education and medical care to all people in society, but in addition, means-tested targeted programs are required to provide social assistance to those people who are in a particular situation, such as extreme poverty.

This research seeks to create knowledge about MCP in children from 0 to 5 years old in Belize and El Salvador from a comparative perspective. The hypothesis of the study is that the multiple deprivations experienced in childhood are influenced by several socioeconomic determinants that help to better predict the incidence and risks of child poverty groups or strata. Then, the assumption is that child poverty is not only multidimensional, but also multifactorial. This study also contributes to knowledge by considering the different dimensions of poverty through which children experience multiple deprivations. Thus, the study uses a conditional latent class analysis (CLCA) to answer the following research questions: a) Which group of children is most likely to present various social deprivations? (items-response probabilities)? b) what is the incidence of MCP in Belize and El Salvador? c) how many different groups or strata of MCP are there in Belize and El Salvador, and what is the incidence of each latent class in both countries? and d) what are the risks of being multidimensionally poor in childhood influenced by socioeconomic determinants in both countries?

This research advocates a wellbeing approach to measuring MCP, however, it uses the multiple deprivations that children experience as denials of their rights. The set of child poverty dimensions based on previous studies are: nutrition; health-care services, durables and tenancy, shelter, water and sanitation facilities. This study calls for a holistic view based on child wellbeing, thus also considering child development and information as important aspects of child wellbeing/poverty.

So, we first assert that child poverty is a denial of children's rights and then explain the importance of introducing a broader set of dimensions and indicators to measure child poverty. We then construct a latent dependent variable by using a broader set of rights indicators, beyond the basic floor of children's rights. And it is empirically corroborated at the end of the study.

[9] CRC is the Convention on the Rights of the Child.

2 Background: Child Poverty as a Denial of Children's Rights

The international Children's Rights framework emerged from the consensus-based decision-making process adopted by national governments to uphold compliance with the rights of the child in the 1989 United Nations Convention on the Rights of the Child (UNCRC) (UN, 1989). This framework is derived from the Universal Declaration of Human Rights (UDHR), enacted in 1948, which recognizes that every human being has universally agreed upon rights and freedoms (UN, 1948).

Under the specific framework of the Rights of the Child, the UN Convention has established obligations to the State, societies and families in order to guarantee protection and care for child's well-being. Social security and social insurance for children were adopted in their article 26 of the UNCRC convention (UN, 1989). This view provides with the elements for the United Nations to define the relationship between child poverty and children's rights by acknowledging that child poverty and deprivation mean a violation of children's rights (Speth, 1998).

The UNGA definition of child poverty integrates the notion of the denial of rights:

> "…*children living in poverty are deprived of nutrition, water and sanitation facilities, access to basic health-care services, shelter, education, participation and protection, and that while a severe lack of goods and services hurts every human being, it is most threatening and harmful to children, leaving them unable to enjoy their rights, to reach their full potential and to participate as full members of society*" (UNGA, 2006: 46).

The UN's Economic and Social Council (ECOSOC) defines also human poverty as: "*…a denial of choices and opportunities, a violation of human dignity. It means lack of basic capacity to participate effectively in society* (ECOSOC, 1998, statement No. 3). In that sense, the Child Rights framework permits us to assess the extent of multidimensional poverty and deprivation that children experience as the denial of their rights.[10] Articles 24 and 25 of the UNCRC establish the right of all children and adolescents to enjoy the highest attainable standard of health and to receive proper care (UN, 1989). States parties to the Convention are also urged to strive to reduce child mortality, combat disease and malnutrition, ensure appropriate prenatal and postnatal health care for mothers, provide health education and develop preventive health care services. A key indicator to measure the Latin American region's progress toward these goals is the infant mortality rate, which has decreased thanks to improvements in access to adequate nutrition, immunization, medical treatment and basic infrastructure (UN & ECLAC, 2018).

The United Nations (UNICEF, 2021) has defined child poverty as "*the lack of public and private material resources to realize their rights constitutive of poverty* ", and its measures are based on a set of child deprivation indicators referring to the

[10] It should be noted that the core of this study is a comprehensive set of children's rights, which are seen as 'denials of rights' or indicators of deprivations for the measurement of child poverty. It is also acknowledged that there are other theoretical perspectives that are based on social needs, social perceived necessities/consensual needs, capabilities approach, unsatisfied basic needs, etc., that are not necessary based on a normative or domestic legislation.

violation of the children's rights in its basic floor and from this, measures can be compared globally. It should be acknowledged that the constitutive rights of poverty are included in specific dimensions, which are: education, health, housing, nutrition, sanitation, and water.

Delamonica (2020) states that there are rights that constitute poverty, and not all human rights integrate this concept. He also argues that scholars such as Lister (2004) have defined other poverty dimensions that can be analyzed apart from the human rights perspective. However, it is also true that the Unites Nations (UN) has stated that the legally binding system is established for duty bearers and rights owners to protect children from malnutrition, lack of education, information, maltreatment, neglect, abuse and exploitation, (UN, 1989). So, from the UNICEF's perspective the last mention dimensions of analysis would not integrate the concept of child poverty.

Nevertheless, the wellbeing approach can broaden our vision. Ben-Arieh et al. (2014) state that a wellbeing approach is heterogenous and multifaceted and may also have a normative character or involves implicit or explicit judgments about what is good or bad in the multiple dimensions of well-being. And there is also a crossover of ideas between Children's Rights and their wellbeing. The reason can be explained because there is a general agreement that rights-based indicators have two characteristics, they can be measurable from a normative framework and that makes them acceptable and valid as they are based on an international framework, and at the domestic level, they represent social and democratic consensus. Secondly, there is an advantage to including deprivation in the MCP measure, as a human rights-based approach defines the obligations of governments and society in terms of achieving the wellbeing of children and reducing poverty. The relevance is that children and adolescents are placed at the core of public policy for the fulfilment of their rights (Abramovich, 2006; Pautassi & Royo 2012). In terms rights recognition, child poverty and deprivation are the opposite of child well-being.

So, we have included a comprehensive set of children's rights and socioeconomic determinants to account not only for the incidence of different strata of child poverty, but also for its risks. Thus, the first section recognizes deprivation as the denial of children's rights. Secondly, we mention the comprehensive set of children's rights established in Belizean and Salvadorean legislation. Third, we address the meaning of child poverty through the wellbeing approach. We subsequently constructed a latent concept of the MCP and finally empirically tested and reached the conclusions of the study.

2.1 Children's Rights in Belize and El Salvador

Belize and El Salvador have adopted international and domestic frameworks on the Rights of the Child: the UDHR declaration establishes in its Article 25, the right to an adequate standard of living for every person and their family, through access to food, clothing, housing, as well as necessary social services and social security. Furthermore, Article 25 establishes the specific right to motherhood and childhood, and to their special care and assistance, as well as to the social protection of all children. The right to education for every person is established in Article 26. Additionally, the Universal Declaration upholds that elementary education shall be free and compul-

sory (UN, 1948). Also, children's rights are considered part of social rights, defined in the International Covenant on Economic, Social and Cultural Rights (ICESCR) in 1966,[11] because it establishes that every person must have access to the means to have decent living conditions (OHCHR, 1966).

In Belize, the UNCRC has been ratified since 1990 (UN, 2023) and this framework has been legally enforced by domestic laws, which also establish the rights of children and their progressive realization (ILO et al., 2015). For example, "The Families and Children Act" establishes in its Article 46, Part V the following mandate:

> "*It is a general duty of the Government -(a) to safeguard and promote the welfare of children; and (b) to mediate in any situation where the rights of a child are infringed upon and especially with regard to the protection of a child, the child's health and education, and the child's succession rights to the property of his parents*" (Law Revision Commissioner, 2000, p.42).

Also, the Constitution of Belize establishes the respect of the principles of social justice and states that there should be adequate means of livelihood for all, as well as equal protection should be given to children regardless of their social status, and a justice system should be ensured to provide education and health on the basis of equality (Constitute, 1981, reformed 2011).

Similarly, El Salvador harmonized its domestic legislation with the UNCRC by approving a special law in 2009 to define the rights of Salvadoran children, called the "Law for the Comprehensive Protection of Children and Adolescents", (LEPINA,[12] by its Spanish acronym).

The LEPINA law has established that children are citizens with full rights in its Article 5 and also states the following rights for children in Article 20:

> *"a) Nutritious and balanced diet under the requirements and regulations established by the health authorities;*
> *b) Dignified, safe and hygienic housing, with essential public services such as drinking water, sewerage and electricity;*
> *c) Clothing appropriate to the climate, clean and sufficient for their daily activities;*
> *d) Recreation"* (UTE, 2009, p. 11).

LEPINA also establishes a comprehensive set of rights encompassing the rights to education[13]; health care; social security; development, recreation, as well as the access to information, among others. This law also defines protection mechanisms through the "National System for the Comprehensive Protection of Children and

[11] Belize ratified the ICESCR in 2015 and El Salvador in 1979 (UN, 2023).

[12] In Spanish the complete name of the law is 'Ley de Protección Integral de la Niñez y la Adolescencia'.

[13] The law establishes in its Article 81 that education will be comprehensive and will be aimed at the full development of the personality, aptitudes, mental and physical abilities of children (UTE, 2009).

Adolescents",[14] which in turn comprises a Council, local committees, local boards, etc. to implement the fulfillment of children's rights. (UTE, 2009).

Both countries show the rights established in the normative frameworks either in the Family and Children Act of Belize or LEPINA legislation of El Salvador, which are the basis to identify child-specific deprivations to measure the MCP.

This normativity shows a social agreement concerning the entitlements that should be considered to realize the child rights for everyone above mentioned. These consider not only the basic rights, for instance, LEPINA adds recreation as a child right and The Families and Children Act adds welfare for children, including children living with disabilities (Law Revision Commissioner, 2000; UTE, 2009).

The international covenants also have defined a comprehensive set of child rights such as care, information, protection, opportunities, participation in society, improvement of living conditions, protection from economic and social exploitation (UN, 1948; UN, 1989; ECOSOC, 1998; UNGA, 2006, 2023, etc.) In addition, both countries show in their domestic legislation a broad set of rights that consider for instance, a child's life free of violence, regulations on child labor, among others (Law Revision Commissioner, 2000; UTE, 2009).

3 The Meaning of MCP from the Point of View of Child Well-Being and a Comprehensive Set of Rights

The 2005 State of the World's Children addresses that 'child poverty' involves deprivations that have been identified as the lack of material, spiritual and emotional resources necessary for children to survive, develop and flourish that prevents them from enjoying their rights, and prevents them from reaching their full potential to participate as members of society (UNICEF, 2004). Therefore, it is acknowledged that all kinds of deprivations have adverse consequences on the lives of children. Despouy (1996) argues that poverty is not considered as a denial of a right or a category of rights, but as a denial of human rights as a whole.

Multidimensional poverty means as all kinds of deprivations and conditions that infringe the human rights (Speth, 1998). Pemberton et al. (2007, 2012) states that there are different categories of rights and child poverty is related to the basic human needs that characterize poverty and cause poor health. This is the view of a basic floor of rights to measure child poverty. However, human rights are interrelated, so the fulfillment of some rights depends on the prior realization of others (Doyal & Gough, 1991) and the step forward towards a definition and measurement of multidimensional poverty in childhood requires implementing the different categories of rights, based on the principle of progressivity and child development. This has already been affirmed by the United Nations Convention (1989). The non-justiciability and lack of application of the entire set of rights, such as social, economic and cultural rights, prevent the adequate implementation of anti-poverty policies and their realization implies less possibilities of being achievable. Our approach is based on a comprehensive set of the children's rights to achieve wellbeing and is explained below:

[14] Its name in Spanish is 'El Sistema Nacional de Protección Integral de la Niñez y de la Adolescencia'.

According to Tuñón et al. (2015), MCP encompasses several kinds of social, cultural and environmental limitations that prevent children from achieving their development, such as for example, illness, inadequate nutrition, lack of time for recreation, lack of information and domestic violence. All of these types of deprivation have harsh consequences for children, such as not realizing their adequate mental, emotional, or physical well-being (Ben-Arieh et al., 2014). All these aspects need to be considered for a comprehensive definition of MCP, since the United Nations has established compliance with the rights of children, taking into consideration their participation as full members of society (UNGA, 2006).

Biggeri and Cuesta (2021) have devised the 'Integrated Framework of Child Poverty' (IFCP) that incorporates the relational dynamics of the different levels of MCP based on different poverty approaches: the Human Rights (HR), the Basic Needs and Capabilities, and offers explanations based on the 'bio-ecological framework', of Bronfenbrenner and Morris (1998). The IFCP approach explains not only the characteristics of MCP, but also its determinants by acknowledging that there are social, cultural and geographical aspects that affect child wellbeing, which are those related to the individual, household or community level. In this sense, we advocate their framework with the purpose of identifying indicators based on human rights (children' rights), however, we also include characteristics related to the wellbeing of children and their development influenced by the socioeconomic and geographical factors that determine the MCP.

Furthermore, Biggeri and Cuesta (2021) state that the Human Rights Approach has two fundamental specificities, they refer to *de jure* entitlements as the milestone of HR because they are established in legal systems and must be guaranteed by the State; for example, a child has a *de jure* right to education. The second specificity refers to de facto status of rights, i.e. actual access to the educational right, which depends on factors or opportunities in the home and community, which is also related to the level of wellbeing of children.

Pautassi & Royo (2012) have mentioned that there is a distinction between socioeconomic indicators and rights indicators per se. Therefore, an integrated view such as that of the IFCP (Biggeri & Cuesta, 2021) is required for the purposes of this study, because it takes into account not only the indicators of deprivation (seen as denial of children's rights) but also how each one of the dimensions of poverty interact and determine the wellbeing and development of children, in order to consider multiple factors that define the risks of sinking into poverty. The importance of integrating children's rights within the wellbeing perspective is that MCP analysis allows for a holistic view, not only of children's outcomes in terms of deprivation, but also of their contextual and political dimension (Dawes, 2006). So, "*a well-being approach permits one to focus on key areas of children's health, capacity development and participation that are known to be essential for the child's overall positive development. A wellbeing approach also benefits from being informed by theory and empirical research on the factors that promote or threaten child development in different domains*" (Dawes, 2006: 7 quotes Huston, 2002). The rights-based approach state that entitlements for children should be equal, which means that children should grow up in an appropriate environment without discrimination (UNCRC) (UN, 1989). Socioeconomic indicators should be included in a measure of child poverty to take into

account disparities and discrimination. This can give us a comprehensive view of the problem and, in practical terms, help monitor disparities or discrimination in terms of gender, race, religion, disability, neighbourhood, geographical spaces, etc. (Ennew, 1999; Huston, 2002).

Ben-Arieh et al (2014) state that "*the principle that children should not live in poverty requires an elaboration of what poverty for children implies; underscoring the child's right to develop his or her potential illustrates that poverty cannot be delimited by a purely material standard*" (p. 3).

Similarly, other scholars have defined MCP from the wellbeing approach by considering indicators of child rights – or deprivation indicators, which s are seen as the denial of rights and for the purpose to achieving a comprehensive measure of MCP to inform social policy. So, child poverty is "*the lack of adequate living standards that prevent children from living decently and realizing their physical, social, cultural, psychological, emotional and mental development; aspects that are also related with children's wellbeing and health. All conditions and circumstances that prevent children from achieving decent standards of living that are related to their social and human rights, we define them as deprivations, which in terms of the social rights-based approach are seen as violations of the rights of children. All those deprivations and conditions that threaten children's wellbeing and child development mean poverty*" (Guillén-Fernández & Vargas-Chanes, 2021:1955).

These conceptualizations of MCP can also be confirmed for empirical studies. For instance, Brooks-Gunn and Duncan (1997) have shown strong associations between child poverty as measured by low income and a wide range of measures of child wellbeing. Furthermore, Chaudry and Wimer (2016) evaluate how several indicators of child wellbeing vary between poor and non-poor children, and find a higher prevalence for the first mentioned in health measures (childhood obesity and asthma); education (high school dropout) and low food security. Additionally, scholars find that income poverty prevents parents from contributing to children's development and educational outcomes, including educational toys, books, and high-quality early care and education, and that low family income is related to less secure parent attachment, less warmth, less attention, harsh discipline and negative mood (Mistry et al., 2002; Yeung et al., 2002). Additionally, González et al. (2021) state that childhood is a period of evolution and poverty may have short- and long-term implications, for example, poverty may influence mental health and health habits, in particular, this was evident in Spanish children living in the lowest social class.

Also, Paz (2016) integrates the concept of wellbeing and poverty from the Child Rights approach to study the MCP for Argentine children. The scholar points out that is important to study poverty from a comprehensive perspective of rights, since there is still a significant gap between formal rights legislation and effective access. The scholar also characterizes child poverty taking into account the following analytical dimensions: nutrition, health, education, information, sanitation, housing, environment, protection against violence, protection against child labor, and play. One of the relevant findings of this UNICEF research report in Argentina is that physical and verbal violence is the second important analytical dimension, revealing that 31% of Argentine children present deprivation in this matter (Paz, 2016: 57). This dimen-

sion will be considered in the present study, since it is important for the MCP and for designing and implementing antipoverty policies.

Gordon et al. (2003) state that severe deprivation of basic rights has serious adverse consequences that may be irreparable in the short- or long term for the health, well-being, or the development of the children. Child wellbeing can then be conceptualized from the perspective of children's rights, since it is incorporated within an international framework based on principles, norms and legislation so that infants, in this case, can have a dignified life as citizens. The relevance is that children and adolescents are placed at the core of public policy for the accomplishment of their rights (Abramovich, 2006; Pautassi & Royo, 2012).

4 Multidimensional Child Poverty as a Latent Construction: a Measurement Proposal

Gordon et. al. (2003) developed an international measure of MCP to compare child deprivation in developing countries. This methodology is called the 'Bristol approach' and was adopted by UNICEF, since 2005 in their report '*The State of the World's Children 2005*'. The "Bristol approach" includes levels of child deprivation, such as moderate and severe deprivation, and its measure was initially estimated for 46 developing countries This approach is based on notions of deprivation of basic human needs and children's rights. They defined absolute child poverty as deprivation in terms of nutrition, safe drinking water, sanitation facilities, health, housing, participation and protection, education and information, which are domains agreed upon at the 1995 UN World Summit on Social Development in Copenhagen (UN, 1995).

Table 1 shows the set of domains and indicators classified according to the criteria of the UNGA's (2006) definition of child poverty as well as the 1995 UN World Summit (column a). This classification also allows us to compare this set according to some measures of child poverty. For instance, the UNICEF (2004) indicators in column (b) are those presented by the Bristol School. These include child-specific indicators of deprivation such as nutritional diet, going hungry, malnutrition, immunization and primary or secondary school attendance, and household deprivation as well.

On the other hand, ECLAC & UNICEF (2010) measure child poverty considering two dimensions of child poverty: nutrition and education with deprivation indicators of weight for age and height for age; as well as school attendance and educational attainment. There are also three dimensions of household poverty, which are access to information with indicators of access to electricity and radio, TV or telephone; as well as accommodation and access to water and sanitation facilities. The last two dimensions mentioned include indicators of deprivation such as floor, ceiling and wall materials; overcrowding; access to drinking water and household with a sewer connection (column c).

In the Mexican case, UNICEF adopted CONEVAL's[15] multidimensional poverty measure to report child poverty in its series '*Poverty and social rights of children and adolescents in Mexico, 2008–2016*' (UNICEF & CONEVAL, 2019). The official measurement of poverty in Mexico emerged from the General Law of Social Development of Mexico, enacted in 2004 (LGDS law by its Spanish acronym) (DOF, 2004). The LGDS establishes the importance of developing a poverty measurement methodology from a human rights perspective. Thus, CONEVAL measures multidimensional poverty on these bases. However, children's needs are still identified as part of their household needs. Although, these institutions use disaggregated information on the general results of multidimensional poverty and use indicators of deprivation at the household level, such as basic services in housing and quality of housing, which is also composed of the type of dwelling's materials and overcrowding, etc. (column d). Only two types of deprivation refer to child-specific indicators, namely, educational attainment and access to food. Other children's rights, such as participation. protection, information and durable goods, are not found in the CONEVAL report.

On the other hand, there is a report carried out by UNICEF (2015), the Government of El Salvador and Le Gouvernement du Grand-Duché of Luxembourg who also advocated a household approach for measuring MCP (column e). This approach includes the analytical dimensions of participation and protection composed of indicators such as child care and child labor. Indicators related to habitat quality are the access to public recreational spaces, the right to live in a safe places in terms of the risk of crime and delinquency, the access to public security and the right to enjoy a safe environment.[16] This work reports the percentage of children living in poor households, it is not an individual measure for children.

From a child rights perspective, any measure of poverty should encompass all facets in which children experience the denial of their rights (Guillén-Fernández, 2017). Gordon (2008) states that the social and economic-distributive justice literature often identifies children only as a property of the household or family, therefore, the needs of children, in effect, are considered identical to the needs of their families. Therefore, this study advocates that children's needs be recognized in any MCP measure, to adequately report the incidence of child poverty in order to develop appropriate anti-poverty policies.

This analysis allows us to restructure the concept of MCP and its dimensions. Columns (e) and (f) are UNICEF reports for El Salvador and Argentina, and show a comprehensive set of indicators and dimensions of child poverty. Particularly, Paz (2016) includes for the UNICEF report for Argentina, indicators related to verbal and physical violence, access to internet and play, which will be included in our MCP latent variable, since these indicators are also established in the children's rights legislation of Belize and El Salvador (Law Revision Commissioner, 2000; UTE, 2009). In addi-

[15] CONEVAL is the National Council for Social Development in Mexico, in charge of measuring multidimensional poverty at the national level in Mexico.

[16] This measure is based on the Alkire-Foster approach, based on their counting approach of deprivations to define whether a household is poor or not (Alkire & Foster, 2009; UNICEF, 2014).

Table 1 Child poverty dimensions & indicators operationalized and measured from the UNICEF approaches

(a)	(b)	(c)	(d)	(e)	(f)
UNGA (2006)	UNICEF (2004)[a]	ECLAC & UNICEF (2010)	UNICEF & CONEVAL in Mexico (2013)	UNICEF (2014, 2015) El Salvador	Paz (2016) Argentina
Nutrition	-Assessment of nutritional diet -Going hungry -Malnutrition and starvation	-Weight for age -Height for age Both indicators are only for children aged 0–4 years	-Children's access to food	-Food insecurity	-Exclusive breastfeeding -children according receive food adequately
Health-care services /Social security	-Medical care, includes immunization	Na	-Access to health care services -Access to social security	-Access to health services -Adults' underemployment. unemployment (household' members) -Social security	-Health care services -Diarrhea or cough
Participation & protection /Habitat quality	Child labour, -Child marriage[b]	Na	Na	-Child care -Child labor -Public recreational spaces -Safe of crime and delinquency -Public security -Being free of environmental risks	- Verbal or physical violence - Child labor - Intense domestic work -Dwelling placed in a polluted area
Education	-Education: inadequate teaching, attending primary or secondary school	-School attendance -Educational attainment	-Educational gap	- School attendance -Educational gap -Adults educational attainment (households' members)	- Mandatory education - Age-appropriate school attendance
Information	-Information: access to radio, television, newspapers, books)	-Access to radio, TV or telephone	Na	-Access to information devices	-Access to TV, landline, mobile -Access to a computer or internet
Durables and tenancy	- Na	Na	Na	-Security in the land tenure - Ownership of land - Goods - Expenses	Na

Table 1 (continued)

(a)	(b)	(c)	(d)	(e)	(f)
UNGA (2006)	UNICEF (2004)[a]	ECLAC & UNICEF (2010)	UNICEF & CONEVAL in Mexico (2013)	UNICEF (2014, 2015) El Salvador	Paz (2016) Argentina
Shelter and facilities	-Shelter: facilities in the dwelling	-Dwelling: overcrowding and floor, ceiling, and walls materials - Access to electricity service	-Quality of the dwelling: floor, ceiling and walls materials -Overcrowding index -Basic services in the dwelling: electricity and fuel	-Adequate ceiling materials - Adequate flooring and walls materials -Overcrowding	- Overcrowding (3 people per room) -Inadequate flooring -Precarious housing
Water and sanitation facilities	-Safe drinking water and sanitation facilities	-Drinking water according to source, supply and access time -Connection to a sewer system	-Basic services in the dwelling: access to water and drainage service	-Safe drinking water -Sanitation facilities	- Household has drinking water into the dwelling - Does have a toilet, etc
Play and social interaction	Na	Na	Na	Na	-Child plays with other children -The child has a bad mood to play -Does not play

Source: Own elaboration based on information provided by UNGA (2006, p. 46); Gordon et. al. (2003); UNICEF (2004); ECLAC & UNICEF (2010); UNICEF & CONEVAL (2013, 2019); UNICEF (2014, 2015) and Paz (2016)

[a] These indicators refer to the countries report launched by UNICEF in 2007–2008 for its Global Study on Child Poverty and Disparities, indicators depend on the levels of child deprivation (moderate and severe) defined by Gordon et al (2003)

[b] These indicators are not considered as part of the measure of Child Poverty and Severe Deprivation (UNICEF, 2004, p.21)

tion, Paz includes in his report several socioeconomic determinants, such as rurality, ethnicity, low educational level of the mother, as a driver of high child poverty, etc.

Drawing on the conceptualizations of MCP mentioned above, we identify multiple dimensions and indicators of poverty that prevent children from achieving a decent livelihood. First of all, it is pertinent to classify the dimensions of poverty into two groups, which include specific indicators for children, in addition to indicators of household deprivation. Our latent construct identifies three dimensions of child poverty for the first group, which are: 1) nutrition; 2) health-care services; 3) child development; and four dimensions for the second group mentioned as follows: 4) information; 5) durables and tenancy; 6) shelter and facilities and 7) water and sanitation facilities.

One of the main proposals of our latent construct is that it includes 'child development' in the measurement proposal, as several scholars claim that this analytical domain is crucial to achieving child well-being (Berlinski & Schady, 2015; Duncan & Brooks-Gun, 2003; Garbarino, 2014) and there are few studies that consider this dimension to measure the MCP. Some of the indicators to evaluate this domain are recreational items, books and activities that support the children's learning, as well as access to games, among others. Also, Zhao et al., 2023 consider important to include variables such as being free of bullying, violence and child abuse.

Child development is essential in early childhood. Tunón et al. (2015) study the MCP in Argentina considering deprivations due to deficiencies in early stimulation and therefore, the scholars include indicators referring to reading stories, playing with children, attendance at educational centers and physical or verbal abuse, among others. Indeed, Bundy et al. (2009) have considered indicators related to artifacts such as toys, balls, and dolls that are evidence of age-specific stages of child development that point toward periods of play, recreation and child development. Additionally, access to recreational activities implies that children are more likely to have positive effects on their development; for instance, access to extracurricular activities and recreation helps children achieve their own identity and create social skills, which allow them to develop their capacities to be included in their own society. Other important aspects for child development are access to parks or green areas, which contribute to reducing MCP. On the other hand, the presence of deprivation of this type increases the risks of stress, teenage pregnancy and drug use in adolescents (Fredricks & Eccles, 2008; García & Ritterbusch, 2015). The stages of development in children involve the acquisition of cognitive and linguistic skills,[17] particularly from zero to five or six years (Fernández, 2014). On the contrary, Duncan and Brooks-Gun (2003) state that persistent poverty negatively affects early childhood by hindering children's educational capabilities and achievements in these stages.

Additionally, several scholars state that child abuse prevents the full potential of brain development, because their effect is negative in the child's cognitive ability and educational achievement. The effects also include anxiety, depression and social iso-

[17] For example, children's language development begins before they speak their first word and is a complex process related to other processes, such as attention, memory, language, and motivation (Berlinski & Schady, 2015).

lation (Belsky & de Haan, 2011). So, another important indicator of child well-being is to be safe from domestic violence (García & Ritterbusch, 2015).

On the other hand, we considered material deprivation, such as the lack of household's potential and real consumption, which refers to the capacity of the child's household to afford material needs. This type of dimension is particularly used in the British and the European studies on poverty (Boarini & Mira, 2006; Guio et al., 2016). Material indicators or commodities at the household included are to have a TV, a radio, access to a computer at the household (school or workplace), a DVD, a clock, a fridge, a washing machine, etc. Services in the dwelling are fuel for cooking at home, drinking water and a toilet at the dwelling, etc. Furthermore, 'internet' is included in our latent construct, in the information dimension.

4.1 The Importance of Socioeconomic Factors in the Measure of MCP

The importance of showing the socioeconomic factors that affect MCP in Central America lies in understanding that early childhood development is a process that includes physical, language, motor, cognitive, and socio-emotional development that occurs in the first years of life, and therefore, the non-realization of social rights or wellbeing due to the influence of different types of social, economic and environmental factors can have irreversible consequences for the rest of the children's lives (UNICEF, 2018), such as living in poverty and not being able to escape of it at later ages.

For instance, ethnicity, rurality, low employment, etc. are factors that influence directly the risks of being multidimensionally poor, but also may accentuate disparities and inequalities to produce different socioeconomic or poverty strata. These factors are result of structural economic conditions in Central America that leave some children in vulnerability and can also determine the intergenerational transmission of poverty among families. Particularly, children represent a key population group, because their vulnerability to poverty and the condition of poverty per se may persist to the adulthood and can be transmitted through generations (Wagmiller & Adelman, 2009; PNUD, 2010).

UNICEF & CONEVAL (2019) acknowledge that ethnicity is one of the social determinants that most influences the presence of poverty in Mexico. Indigenous children are more likely to present MCP. Also, the high degree of marginalization of many indigenous communities and lack of access to schools, or precarious conditions are among the main causes (UNICEF, 2018).

Additionally, the United Nations Children's Fund has acknowledged that there are considerable disparities between urban and rural areas concerning the problem of child poverty. Naciones Unidas (2016) have shown that poverty levels in rural areas of Belize are twice those of cities, 43% compared to 21%. Some explanations are the low educational level of household heads, the low participation of women in the paid labor market and the high proportion of ethnic minorities.

Other factors are also important to be considered, such as for example, children living in mother-headed households as they are particularly more vulnerable to falling into poverty. In El Salvador, there were 32% of households in multidimensional poverty headed by women in 2015 (UNICEF, 2015). Additionally, in Belize, 21% of

girls aged 15 to 19 years were currently married or in a union, which also means that girls enter at work early and are likely to drop out of school, so, they present high vulnerability to unemployment and risks of sinking into poverty (UNICEF, 2015; UNICEF et al., 2020).

Central America requires a comprehensive policy framework not only to tackle MCP, but also policy measures in favor of increasing opportunities particularly in the labor market for women, as well as increasing the educational achievements for women and adults in general, as an essential tool to reduce child poverty rates (Pérez, 2016). Thus, the knowledge of the socioeconomic factors influencing poverty could help to better orientate social policies to tackle MCP.

5 Method and Data

We will test our construct of MCP as a latent variable by using secondary data analysis and applying latent class analysis (LCA), which is a type of structural equation modeling. LCA is a statistical method that aims to characterize a set of latent categorical variables on the basis of the relationship structure of a set of manifest variables (Lazarsfeld & Henry, 1968). The latent class model is expressed in terms of the estimated latent class prevalence and the item response probabilities, given class membership (Collins & Lanza, 2010). LCA models are used in studies that rely on structural equation modeling. In these cases, the researcher usually uses concepts or variables of interest that cannot be measured directly, but are approximated through manifest variables. The assumption of this type of analysis is that the variables have a correlation structure between them, which can generate latent variables. LCA allows us to identify unobservable (latent) classes within a population based on observed multivariate responses (Vermunt & Magidson, 2002).

The advantages of these multivariate techniques are that we can examine the validity and reliability of the poverty dimensions and indicators that are part of the latent variable, based on the goodness of fit of the model (Collin & Lanza, 2010).

It is also important to estimate in a multidimensional measure the way in which dimensions and indicators can be combined. From a de facto point of view, effective access to services, for example healthcare, nutrition or drinking water, may or may not be interrelated and the achievement of wellbeing depends on various regional, environmental and socioeconomic characteristics, etc. (Biggeri & Cuesta, 2021).

Another important advantage of estimating LCA is that we can stratify the population by identifying latent groups based on different factors, such as socioeconomic determinants. The results will show not only the incidence of MCP by groups, but also the risks of being multidimensionally poor, so that we can estimate the most vulnerable children, which in terms on a comprehensive rights perspective means that we can identify children who do not see their rights realized. Dawes (2006) has stated that disparities cannot be ignored.

Particularly, the method used in this study to estimate the MCP is a Conditional Latent Class Analysis (CLCA). The base model is Latent Class Analysis (LCA), that is, it does not contain covariates and aims to obtain the joint probabilities based on the Bayes formula (Collins & Lanza, 2010: 41–43):

Equation 5.1

$$P(Y = y, L = c) = P(L = c)\, P(Y = y \,|L = c) = \gamma_c \prod_{j=1}^{J} \prod_{r_j=1}^{R_j} \rho_{j,r_j|c}^{I\left(y_{j=r_j}\right)}$$

where:

Y refer to the array of response patterns,
L represent the categorical latent variable with c = 1. …. C latent classes,
j *1.* .... J observed variables,
r_j 1. …, R_j response categories,
y_j represents the element j of a response pattern y.
$I(y_j = r_j)$ equals 1 when the response to variable $j = r_j$ and equals 0 otherwise.

Then, Eq. 5.1 shows the probabilities of membership in each latent class (γ_c) and the probabilities of observing each response conditional on latent class membership ($\rho_{j,r_j|c}$).

From this formula, the latent dependent variable is derived from the latent concept of the MCP, which was defined by different sets of poverty dimensions and indicators in Table 2 above, based on the Children's Rights. The LCA will allow us to stratify the population groups of children living in multidimensional poverty.

Furthermore, the CLCA model is estimated to include covariates, which are evaluated as the socioeconomic determinants in our empirical model. The purpose is to predict the probabilities of experiencing multiple deprivations based on these determinants from a more comprehensive view of poverty. The inclusion of covariates in the model helps us classify groups more accurately. The general formula of the CLCA model is stated as follows (Collins & Lanza, 2010: 153):

Equation 5.2

$$P(Y = y \,|X = \mathrm{x}) = \sum_{c=1}^{C} \gamma_c(x) \prod_{j=1}^{J} \prod_{r_j=1}^{R_j} \rho_{j,r_j|c}^{I\left(y_{j=r_j}\right)}$$

Therefore, Eq. 5.2 is the Eq. 5.1 described above, but we now incorporate a covariate X, where $\gamma_c(x)$ can be expressed with odds ratios (OR) as in the multinomial logistic regression model (Agresti, 1990).

We use secondary data analysis to test the MCP latent variable. Few surveys capture comprehensive dimensions of child poverty and focus on obtaining specific information about children's needs and rights. This research uses the Multiple Indicator Cluster Surveys (MICS) because it is a specialized survey on child well-being carried out by UNICEF. This study uses MICS data for a sample of countries that includes information on different dimensions of the children's lives in Belize and El Salvador, chosen to represent the MCP in Central America. These countries belong to the fifth round MICS surveys, carried out between 2014 for El Salvador and 2015–2016 for Belize.

The survey was designed and developed under the same theoretical framework and includes the same variables for both countries, i.e. it permits us to compare results for

Table 2 Child poverty dimensions and deprivations incidence in Belize and El Salvador (%)

Dimensions /Indicators	Countries /Incidence	
	Belize	El Salvador
Child specific indicators		
Nutrition		
HA	16	13
WA	5	5
Health-care services		
HCA	**56**	37
VAC	35	20
Child Development		
Cr	**59**	32
Ts	46	**70**
Household indicators		
Information		
Int	**78**	**83**
Ra	31	25
TV	21	13
Mo	7	6
Durables & Tenancy		
Ve	**67**	**81**
Comp	**59**	**78**
DVD/Clk	**54**	**55**
Tn	32	32
Fd	29	34
Wsh	26	**84**
Ba	23	**79**
Shelter & Facilities		
Ov	30	21
Fl	17	23
Wl	15	11
Water & Sanitation Facilities		
Tl	37	**51**
Wr	26	50

Figures above 50% of incidence are highlighted

Abbreviations: HA: height for age; WA: weight for age; HCA: health care access; VAC: vaccination; Cr: children yelled at by their parents or carers; Ts: children's toys; Int: internet at home, school or work place; Ra: radio; TV: television; Mo: mobile or telephone at home; Ve: vehicles; Comp: computer or laptop at household, workplace or at the school; DVD/Clk: DVD or clock; Tn: tenancy; Fd: fridge; Wsh: washing machine; Ba: bank account; Ov: overcrowding; Fl: cooking fuel at home; Wl: walls made of wasting materials; Tl: toilet and Wr: drinking water

a cross sectional analysis. Furthermore, no new set of microdata has been carried out or released for these countries. The MICS is a global survey from which research on child deprivation, malnutrition and other issues is derived (INSP & UNICEF, 2016). The MICS are based on data collected at the community, family (household) and individual levels, and are representative at both the national and sub-national levels and by region (Pomati & Nandy, 2019).

The MICS survey is suitable for estimating MCP in Central America because these surveys provide several analytical dimensions that encompass the concept of multidimensional poverty, such as. a) Water and Sanitation; b) Children's health; c) Child Development; d) Nutrition; e) Child protection; f) Access to the media and use of information / communication technologies and g) household's conditions. The domains of these surveys are considered for the measurement of the MCP and include

information for children under five years old.[18] There were 2,657 children under-five and 4,699 women or caretakers interviewed in the 2015 Belize MICS survey. The response rate was 90%.

On the other hand, the 2014 El Salvador MICS survey contains 7,716 eligible children under five years of age and 13,350 interviewed women. The response rate was 89% (Statistical Institute of Belize & UNICEF, 2017; MINSAL-INS & UNICEF, 2014). It should be noted that children aged 0 to 5 years are the target population of this study.

5.1 Descriptive Statistics: Multiple Deprivation in Belize and El Salvador

The latent construction of the MCP consists of different dimensions of poverty that also include observed variables. These variables are those deprivations of all kinds that children experience in their daily lives in Belize and El Salvador.

Table 2 show the construction of the MCP latent structure model, which is composed of seven dimensions of poverty, based on the set of children's rights in Belize and El Salvador (Law Revision Commissioner, 2000; UNGA, 2006; UTE, 2009). This latent structure also depends on the availability of MICS survey data. The empirical dimensions of the MCP latent variable are: 1) Nutrition; 2) Health care services 3) Child Development; 4) Information; 5) Durables and Tenancy; 6) Shelter and Facilities; and 7) Water and Sanitation Facilities. The first three dimensions include child-specific indicators and the remaining dimensions use household indicators.

These poverty dimensions are composed of different indicators of deprivation. These indicators are 'observed variables' constructed as dichotomous variables, represented in two categories, which are "Non-deprived" and "Deprived". Appendix Table 5 presents the variables, codes and labels, as well as the criteria for identifying deprivation in each observed variable.

We can observe in Table 2 that some specific dimensions of child poverty present the highest incidence of deprivation in both countries, according to the percentages of the items analyzed, such as durables and tenancy; information (regarding internet access) and child development. In particular, high incidence is for health care access in Belize and toilet facilities for El Salvador.

On the other hand, the lowest incidences are for deprivations related to the dimension of nutrition, and shelter and facilities. A third dimension with a relative low incidence is the dimension of water and sanitation facilities for Belize (Table 2); however, the situation is different for El Salvador that shows the dimension of health care services with lower incidences than water and sanitation facilities.

Then, we describe below the incidence in percentages of various types of deprivations for both countries:

[18] MICS surveys include other domains to provide information from mothers and children aged five years and older. These domains are Functioning and disability; Literacy and Education; Aids and sexual behavior; Subjective well-being and depressive symptomatology; and Reproductive health; but they were not considered in this study for the measurement of the MCP as these are not part of the objective of this research article.

A) Child-specific indicators:

The poverty dimension of child nutrition is comprised of height for age (HA)and weight for age (WA)indicators.[19] According to MICS data, the incidence of stunting in Belize is 16% and El Salvador shows an incidence of 13%; both measured by minus 2 standard deviations (sd.). On the other hand, both countries show an incidence of 5% on average regarding the WA indicator. Thus, these figures reveal that stunting continues to be a problem in Central America; children living in poverty also mean not being fed adequately, often from birth or not having access to nutritious food (WHO, 2010).

The analytical dimension of access to health care includes two important indicators for children. The first refers to all types of medical care received, as well as the enrolment of mothers or carers in any type of health care system to which children are also entitled. The lack of this type of access means deprivation and Belizean children present an incidence of more than half (56%) of this population group. El Salvador shows a lower incidence, 37%. The second indicator that encompasses the health care dimension is deprivation in access to vaccination. Belizean children show a high incidence of this lack, 35%, This situation also reveals that the child population in Belize requires greater vaccination programs aimed at extending coverage, particularly in the poorest areas, such as rural areas or indigenous populations, etc. And child deprivation due to vaccination in El Salvador is 20%.

In this study, I have proposed the inclusion of Child Development, as a dimension of poverty, because child development is essential in the growth of children. The variables observed to measure child development, taken from the MICS survey, are access to books and toys at home appropriate for children's age,[20] as well as a favorable environment for the child to grow up without violence, so, yelling at the child was included as an indicator. There are a high incidence of these types of deprivation for children living in both countries. On average, 70% of children in El Salvador are deprived of access to toys at home; in Belize, this percentage is still high, but slightly less than half of the children (46%). Domestic violence also shows high percentages, 59% of children in Belize are yelled at by their parents and 32% in El Salvador.

B) The household's indicators are included in four different dimensions:

The information dimension is comprised of the indicators of internet access, access to TV and radio at home; mobile or landline phone in the home. However, the highest incidences of deprivation due to access to information are those presented by children who lack internet access, 78% in Belize and 83% in El Salvador. On the contrary, deprivation in access to TV is relatively low, 21%

[19] Children are defined as stunted if their height-for-age is more than two standard deviations below the WHO Child Growth Standards median. Underweight for age is also calculated within < -2 sd. from the mean (WHO, 2010).

[20] The variable included in the model was two books or more and was not significant; on the contrary, toys were significant in the model.

in Belize and 13% in El Salvador. Furthermore, the incidence of deprivation in access to radio is higher in Belize than in El Salvador, 31% compared to 25%. And children living in households with adults who do not have a mobile at home, represent only around 7% on average, in both countries.

Moreover, deprivation in access to durable goods show high incidences in both, Belize and El Salvador, especially with regard to deprivation in access to a vehicle at home, as well as access to a computer either at home, workplace or school, and access to a DVD or clock at home. The percentages of deprivation in access to these goods range between 54 and 67 percent of children in Belize; and from 55 to 81 percent in El Salvador.

Some differences are observed regarding the lack of certain items among children in both countries, for example, the lack of access to a washing machine at home and the fact that household members lack a bank account, i.e. Belizean children have a lower incidence of these deprivations, on average 25% of children lack these items at home. However, Salvadoran children present an incidence of 84% for the first indicator above- mentioned and 79% for the second one.

On the other hand, children show deprivations due to the availability of fridge at home, 29% in Belize and 34% in El Salvador.

Children also experience deprivation when the head of household does not have any type of tenancy, the average incidence in both countries is 32%.

Access to accommodation and facilities is another important dimension of analysis. Both countries show that housing materials, particularly walls made from waste materials, are a housing feature with a relatively lower incidence of deprivation compared to the rest of the deprivation indicators (15% for Belizean children and 11% for Salvadoran children). Deprivation due to lack of fuel at home is slightly higher compared to the above deprivation indicators, 17% for children in Belize and 23% for children living in El Salvador. The highest incidence of deprivation in the analysis of this dimension is overcrowding, i.e. 30% of children living in this type of homes in Belize and 21% of children in El Salvador.

On the other hand, deprivation in the access to water and sanitation in housing has been an analytical dimension characterized by people living in poor homes. The percentage of children that do not have a toilet at home is approximately 37% in Belize and more than half of the children in El Salvador (51%). The indicator of water supply at home shows a high incidence of deprivation for Salvadoran children (50%) compared to Belizean children (26%).

We test reliability and multicollinearity for indicators that compose the MCP latent dependent variable. Firstly, the observed variables encompassing the MCP were regressed with a proxy variable of poverty, which is the 'wealth index quintile' (variable found within the MICS dataset for both countries). The purpose was to analyze these indicators as independent variables in relation to the socioeconomic strata for both countries. Then, we tested the Variance Inflation Factor (VIF) following Alin (2010) and found low values for each of the indicators (between 1.0 and 1.5, Appendix Table 7), so, multicollinearity is not present (Baum et al., 2015). This was also corroborated with Pearson correlations lower than 0.5 (Han & Hong, 2011).

Another test that we obtained is Cronbach's Alpha, which shows that the observed variables account for a reliable MCP index, of 0.803 for Belize and 0.708 for El Salvador (Nunnally, 1978).

Certainly, the latent construct of MCP is adequately tested within the CLCA models based on the appropriate statistical tests in the following section.

5.2 Results on the Latent Class Analysis

In this section, the first issue is to analyze the goodness of fit of the models for each country. We follow statistical criteria to carry out this selection process for choosing the best model with the appropriate number of latent classes. This process consists of analyzing the LCA models (without covariates) and then, the CLCA models (with covariates), estimated each type of model for one to four latent classes. Secondly, once the best-fitting models for Belize and El Salvador have been chosen, we aim at presenting the item response probabilities (IRP) for each deprivation component by the selected latent classes, for both countries. Thirdly, one of the advantages of these estimates is the possibility of obtaining the incidence of MCP as a whole and by different strata. Fourth, the study presents the average probabilities of being multidimensionally poor for children aged 0 to 5 years in each country, by poverty strata. Finally, this research also presents the socioeconomic determinants (seen as covariates[21] in the models) that reveal the risks of presenting MCP for Belizean and Salvadoran children.

Thus, the goodness of fit of the model was evaluated based on four main statistics, in order to select the number of classes. These statistical criteria are mentioned as follows: 1) the Bayes Information Criterion (BIC); 2) the Akaike Information Criterion (AIC), both denote a better fit of the model with the smallest value; 3) the entropy value and indices closer to 1 are considered to have better predictability and larger values indicate better latent class separation. Furthermore, an entropy equal to 0.8 suggests that the classification accuracy is greater than 90%; 4) classes should show significant probability based on Lo–Mendell–Rubin (LMR) and Vuong-Lo–Mendell–Rubin (VLMR) statistics, and bootstrap likelihood ratio (BLR) test, when p values reach significant levels (Celeux & Soromenho, 1996; Lo et al., 2001; Nylund et al., 2007; Collins & Lanza, 2010; Zhao et al., 2023).

The estimates have consisted of eight models for each country; four models for each are based on LCA (without covariates), the other four are CLCA (with covariates) and are estimated for the purpose of evaluating the best-fitting model for each country.[22]

Therefore, two latent classes are the optimal number of classes for both countries with the LCA models criteria. Table 3 displays the criteria to identify the most adequate number of classes. We can observe that entropy is of very good quality for

[21] The name of the covariates and their operationalization are explained in Appendix Table 6.

[22] It is worth mentioning in this section that the MICS survey data showed some missing values when the CLCA model was estimated. There were 15 missing data patterns for Belize and 16 for El Salvador. However, the Full Information Maximum Likelihood (FIML) is used for the purpose of applying the covariance matrix of the complete data to analyze the missing data and uses complete data patterns to form a generalized matrix (Arburckle, 1996).

Table 3 Statistics to determining the number of latent classes by country

Number of classes	BIC[a]	AIC	Entropy	LMR[b]	VLMR[c]	BLR
				Value/*P*-value	Value/*P*-value	Value/*P*-value
Models without covariates						
Belize						
1	59775.328	59718.467	Na	Na	Na	Na
2	53711.950	53595.521	0.873	6131.599 0.0000	-29838.234 0.0000	-29838.234 0.0000
3	52849.288	52673.290	0.787	960.693 0.0000	-26754.761 0.0000	-26754.761 0.0000
4	52366.999	52131.434	0.738	582.499 0.0000	-26271.645 0.0000	-26271.645 0.0000
El Salvador						
1	244197.976	244054.592	Na	Na	Na	Na
2	228766.992	228502.864	0.751	15561.401 0.0000	-121989.296 0.0000	-121989.296 0.0000
3	226125.758	225740.886	0.699	2816.146 0.0000	-114181.432 0.0000	-114181.432 0.0000
4	Ntn	Ntn	0.541	Ns	Ns	Ns
Models with covariates						
Belize						
1	77120.064	77041.542				
2	53023.351	52896.091	0.889	6841.007 0.0000	-29838.234 0.0000	-29838.234 0.0000
3	51974.914	51777.255	0.825	1165.153 0.0000	-26401.046 0.0000	-26401.046 0.0000
4	51526.395	51258.338	0.758	568.146 0.0426	-25815.628 0.0420	-25815.628 0.0000
El Salvador						
1	244197.976	244054.592				
2	132935.196	132739.613	0.845	13321.679 0.0000	-72998.654 0.0000	-72998.654 0.0000
3	130713.016	130405.672	0.782	2389.330 0.0000	-66313.807 0.0000	-66313.807 0.0000
4	129896.055	129476.949	0.830	989.158 0.0000	-65114.836 0.0000	-65114.836 0.0000

Source: Own calculation based on the LCA and the CLCA estimated with information provided by the 2015 MICS survey for Belize and El Salvador

[a]Sample-Size Adjusted BIC

[b]Lo-Mendell-Rubin adjusted LRT Test

[c]Vuong-Lo-Mendell-Rubin Likelihood Ratio Test for n-1 (H0) versus n classes

Ntn. Do not terminate normally

Ns. Non-significant

two classes, 0.87 for Belize and 0.75 for El Salvador, i.e. entropy values are lower for other latent classes. Also, the LMR, VLMR and BLR statistics are significant for each latent class. Although, we can see an inconsistency in both cases, the Belize and El Salvador models show the lowest value of BIC and AIC (which is desirable) for four and three latent classes, respectively.

However, the study aims to corroborate Collins & Lanza's (2010) statement that the use of covariates helps to better predict the LCA. This is confirmed for the study once the CLCA models with covariates show entropy values greater than 0.7. The Belize model shows 0.89 for two latent classes, greater than 0.83 for three latent classes, the difference is minimal, and both entropy values are greater than four latent classes (0.76). However, three latent classes in the Belize model meet all the criteria as the BIC and AIC statistics show the lowest values and are significant according to LMR, VLMR and BLR.

The estimated model for El Salvador shows that two and four latent classes present entropy values of 0.8, which are higher than three classes and are significant with the LMR, VMLR and BLR criteria. However, the BIC and AIC statistical criteria reveal that four latent classes are the best-fitting model in this case.

The results have shown that when covariates were included, the goodness of fit of the model was increased. Thus, this study is based on new evidence that shows the importance of using covariates (socioeconomic determinants) in LCA, for a better prediction of poverty strata.

The following analysis derived from the MCP latent concept presented in Table 2. We empirically corroborate this concept together with its latent dimensions for the case of Belize and El Salvador. The MICS surveys will allow us to include in the model information from three dimensions covering child-specific indicators (nutrition, health care and child development) and four dimensions classified in the category of household indicators (information; durables and tenancy; shelter and facilities; and water and sanitation facilities). Therefore, the CLCA models estimated for this research and its results are presented in Table 4. Firstly, we obtained the items- response probabilities, which were analyzed for each deprivation presented by children aged 0 to 5 years in both countries according to each latent class as well.

The latent dimension of nutrition includes two main items (observed variables) that are height for age (HA) and weight for age (WA). In Belize, there are high probabilities of presenting undernutrition for both types of indicators when children are living in extreme poverty, about 0.6, and children presenting moderate poverty and no poverty experience low probabilities of being undernourished. On the other hand, Salvadoran children present high probabilities regarding child undernutrition for each poverty strata. Probabilities of stunting (HA) are clearly concentrated in children experiencing multidimensional poverty,[23] of 0.6 on average, and wasting (WA) shows a probability of 0.7 on average.

Another latent poverty dimension is health care, which encompass vaccination, and the enrollment in health insurance (or access to public or private health services). Belizean children show probabilities about 0.7 regarding the first item and 0.8 due to the last-mentioned set of items. These probabilities are still high and are presented mainly for children experiencing either extreme or moderate poverty.[24]

It is empirically confirmed that MCP in Central America requires to consider child development as a latent poverty dimension since results have been statistically sig-

[23] We refer to MCP when we take into account the different poverty strata: extreme poverty; moderate poverty and low poverty.

[24] The probabilities for El Salvador were not statistically significant.

Table 4 Probabilities of being multidimensional poor for Belizean and Salvadoran children and incidence of poverty

Probabilities / Incidence	Belize			El Salvador			
	Class 1	Class 2	Class 3	Class 1	Class 2	Class 3	Class 4
	Extreme poverty	Moderate poverty	No poverty	Extreme poverty	Moderate poverty	Low poverty	No poverty
Dimensions / Indicators	13%	36%	51%	29%	10%	37%	24%
Child-specific indicator							
Nutrition							
HA							
Deprivation	0.600	0.200	0.076	0.570	0.560	0.550	0.433
WA							
Deprivation	0.634	0.310	0.177	**0.763**	**0.751**	**0.712**	0.265
Health-care services							
VAC							
Deprivation	**0.735**	0.675	0.390	1.000[n/s]	1.000[n/s]	1.000[n/s]	1.000[n/s]
HCA							
Deprivation	**0.862**	**0.804**	0.292	1.000[n/s]	1.000[n/s]	1.000[n/s]	1.000[n/s]
Child Development							
Ts							
Deprivation	**0.811**	0.571	0.288	**0.729**	0.676	0.316	0.300
Cr							
Deprivation	0.680	0.592	0.560	**0.984**	**0.979**	**0.979**	0.028
Household indicators							
Information							
Int							
Deprivation	**0.726**	0.699	0.685	**0.815**	1.000[n/s]	1.000[n/s]	0.169
TV							
Deprivation	**0.846**	0.243	0.025	**0.876**	**0.782**	**0.779**	0.467
Mo							
Deprivation	**0.906**	**0.707**	0.003	**0.984**	**0.963**	**0.957**	0.150
Durables and tenancy							
Comp							
Deprivation	**0.971**	**0.852**	0.307	**0.876**	0.574	1.000[n/s]	0.009
Ve							
Deprivation	**0.955**	**0.823**	0.484	**0.882**	**0.865**	0.556	0.010
DVD/Clk							
Deprivation	**0.955**	0.669	0.340	**0.727**	0.447	0.390	0.240
Fd							
Deprivation	**0.970**	0.405	0.034	**0.970**	**0.737**	**0.735**	0.149
Wsh							
Deprivation	**0.918**	0.329	0.049	1.000[n/s]	1.000[n/s]	1.000[n/s]	1.000[n/s]
Ba							
Deprivation	0.624	0.308	0.063	**0.874**	**0.864**	0.495	0.027
Tn							
Deprivation	**0.850**	0.335	0.346	**0.702**	0.687	0.685	0.355
Shelter and facilities							
Wl							

Table 4 (continued)

Probabilities / Incidence	Belize			El Salvador			
	Class 1	Class 2	Class 3	Class 1	Class 2	Class 3	Class 4
	Extreme poverty	Moderate poverty	No poverty	Extreme poverty	Moderate poverty	Low poverty	No poverty
Dimensions / Indicators	13%	36%	51%	29%	10%	37%	24%
Deprivation Ov	0.673	0.177	0.085	**0.779**	0.595	0.542	0.400
Deprivation Fl	0.681	0.399	0.129	**0.950**	**0.787**	**0.789**	0.419
Deprivation Water and sanitation facilities	**0.824**	0.166	0.011	**0.995**	**0.864**	**0.844**	0.363
Deprivation Tl	**0.976**	0.594	0.053	**0.968**	0.462	0.408	0.029
Deprivation Wr	0.675	0.342	0.053	**0.915**	0.490	0.420	0.094

Source Own elaboration based on the 2015 MICS survey for Belize and El Salvador

Probabilities are statistically significant at $p<0.000$. Probabilities highlighted in bold are the highest for each item

n/s. No significant. Variables were no significant and models including these variables did no terminated normally. The reliable model was estimated by excluding the last-mentioned variables

nificant for Belize and El Salvador. Items included in this dimension are the lack of access to toys at home and child deprivation due to children yelled at by their parents or carers.[25] Salvadoran children present high probabilities of being abused verbally, the probability is about 0.9 for any poverty strata: extreme, moderate or low poverty. Belizean children present a 0.7 of being yelled at by parents when they also live in extreme poverty, and there is no difference when they present moderate poverty or when do not experience poverty, as the probability is of 0.6.

The study also reveals that the lack of toys for children at home is one of the deprivations with higher probability for both countries. Particularly, Belizean children present probabilities of this lack about 0.8 for children in the extreme poverty stratum and 0.6 for those in the moderate poverty stratum. Salvadoran children show probabilities of 0.7 for both strata; lower probabilities of this deprivation are for the non-poor children.

Table 4 displays children's probabilities of being deprived based on their own household's conditions. For example, the proportion of poor children who lack access to information are more likely to suffer from this type of deprivation. The probability of Belizean children to present deprivation in access to internet at home is about 0.7 and for the Salvadoran children is even higher, of 0.8 for the poorest strata. However, we can appreciate that deprivation in access to internet is also spread to children in Belize living with moderate poverty and without poverty, who present about 0.7 of probability, i.e. there is not adequately internet access for the whole population. On

[25] Both indicators were significant in the CLCA model; others were tested, but not significant, such as 'leaving the child alone for days.

the contrary, El Salvador shows almost null probabilities of this lack for non-poor children, of 0.2.[26]

Similarly, the access of a mobile for children is scarce, once probabilities of this lack is about 0.9 for children experiencing MCP in El Salvador (considering the three poverty strata). Belizean children experience high probabilities as well ranging from 0.7 to 0.9 between moderate and extreme poverty. On the contrary, non-poor children show almost null probabilities regarding the lack of a mobile at home.

Overall, children living in households lacking different kind of durables present high probabilities of deprivation in both countries, regarding the following items: deprivation in the access to a computer or laptop[27]; a vehicle; a DVD or a clock; a fridge and the tenancy of the dwelling, for which probabilities of being deprived range from 0.8 to 0.9 for Belizean children who also experience extreme poverty. They are less likely of being deprived because of not having a bank account. Children in El Salvador are deprived of the same durable goods at home as Belizean children, when they are multidimensionally poor with probabilities ranging from 0.7 to 0.9.

On the other hand, the results show that children in extreme poverty in Belize have high probabilities of presenting deprivation due to shelter and facilities at home, and Belizean children in moderate poverty have low probabilities and are also less likely than Salvadoran children to present these deprivations. The latter also show types of deprivation characterized by housing with poor wall materials[28] for the extreme poor, as well as overcrowding and lack of cooking fuel for the multidimensional poor and these deprivations are ranging from 0.9 to 0.8.

The dimension of water and sanitation facilities includes access to a toilet in the home and to the supply of water in the home for drinking and use. Children from both countries present high probabilities only when they are in extreme poverty, showing a probability of 0.9 according to both items. The exception is a 0.7 of probability for Belizean and extremely poor children regarding deprivation of drinking water. And the lack of a toilet in the home is 0.6 for Belizean children living in moderate poverty. Other strata show considerably lower probabilities of suffering this type of deprivation in both countries.

Overall, the IRP are higher for extreme and moderate poverty strata than for those children who experience low poverty or are not poor. However, there are certain patterns for some deprivation indicators that show high probabilities for all poverty strata. For instance, Salvadoran children have high risks of deprivation at all levels of MCP[29] for certain types of items, such as nutritional deprivation in relation to wasting, as well as lack of some durable goods in the household (e.g. a fridge); and accommodation and facilities (e.g. overcrowding and lack of cooking fuel). There are also deprivations in the dimension of child development when children are multidimensionally poor and suffer verbal abuse from their parents or caretakers, and also

[26] Data from El Salvador were not significant concerning the lack of internet for moderate and low poverty.

[27] This deprivation refers to any adult in the home or the child by himself having access to internet either at home, at school or at the workplace.

[28] Floor and roofing materials were also estimated in the model, however, they were not significant.

[29] Multidimensional poverty includes all the poverty strata estimated.

for children with scarce information concerning the lack of access to a mobile phone and a television in home.

In Belize, this pattern is also repeated in a few cases, such as: deprivation due to health care, access to a mobile, a vehicle at home and a computer; and information deprivation, such as internet access, even for those children who are not multidimensionally poor.

From this analysis we can also obtain the average probabilities of the items (multiple deprivations) according to latent classes. Thus, Fig. 1 indicates that this age group in El Salvador presents probabilities of 0.85 of suffering multiple deprivations when they are in extreme poverty. The average probability is also high when children live in moderate poverty, at 0.7. Indeed, we can see in this graph that Belizean children in the moderate poverty stratum show a lower probability (0.5) than Salvadoran children in the low poverty stratum (0.6). However, children living in extreme poverty in Belize have a probability similar to that of Salvadoran children in the same poverty stratum, 0.8.

The CLCA model also allows us to obtain the incidence in percentages of the different latent classes or poverty strata for each country. So, Table 4 reveals that 49% of children in Belize live in MCP. This figure is comprised of 13% of children living in extreme poverty and 36% living in moderate poverty, i.e. just over half of children under five years of age are not poor.

Child poverty in El Salvador display higher figures than Belize, the incidence of MCP is 76%, only 24% of children under five years of age are not poor. The incidence by poverty strata is as follows: 29% of children are in extreme poverty; 10% moderate poverty and 37% present low poverty.

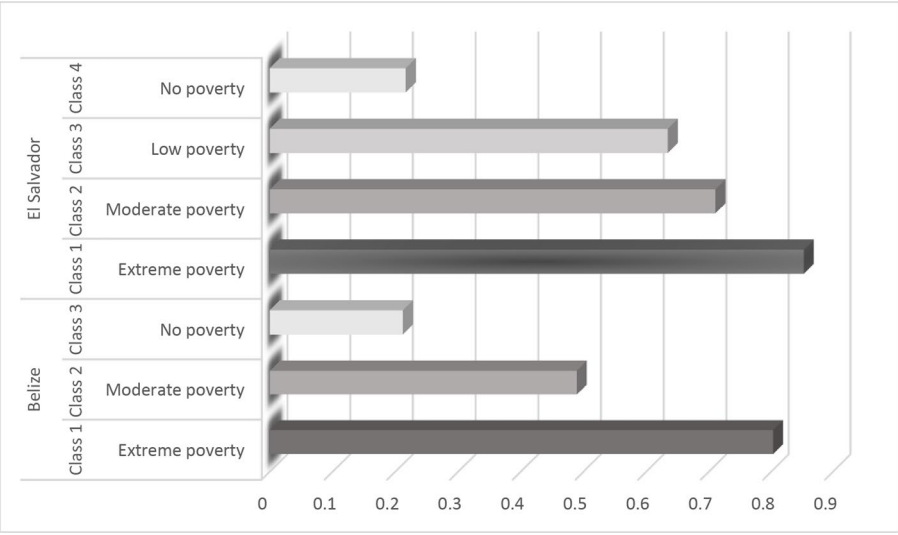

Fig. 1 Average probabilities of experiencing Multidimensional Child Poverty by latent class in Belize & El Salvador. Source Own elaboration based on the 2015 MICS survey for Belize and El Salvador

5.3 The Socioeconomic Determinants of MCP in Belize and El Salvador

This section corroborates empirically that MCP is not only multidimensional, but also multifactorial, which is the main assumption of the study. The CLCA show that socioeconomic determinants of the child poverty problem are significant, however, these types of factors influence in a different manner among the latent class groups.

Figure 2a and b show the socioeconomic factors that determine the risks (odds ratios) of experiencing extreme, moderate or low-poverty in Belize and El Salvador. These results are compared with the group of non-poor children in each country.

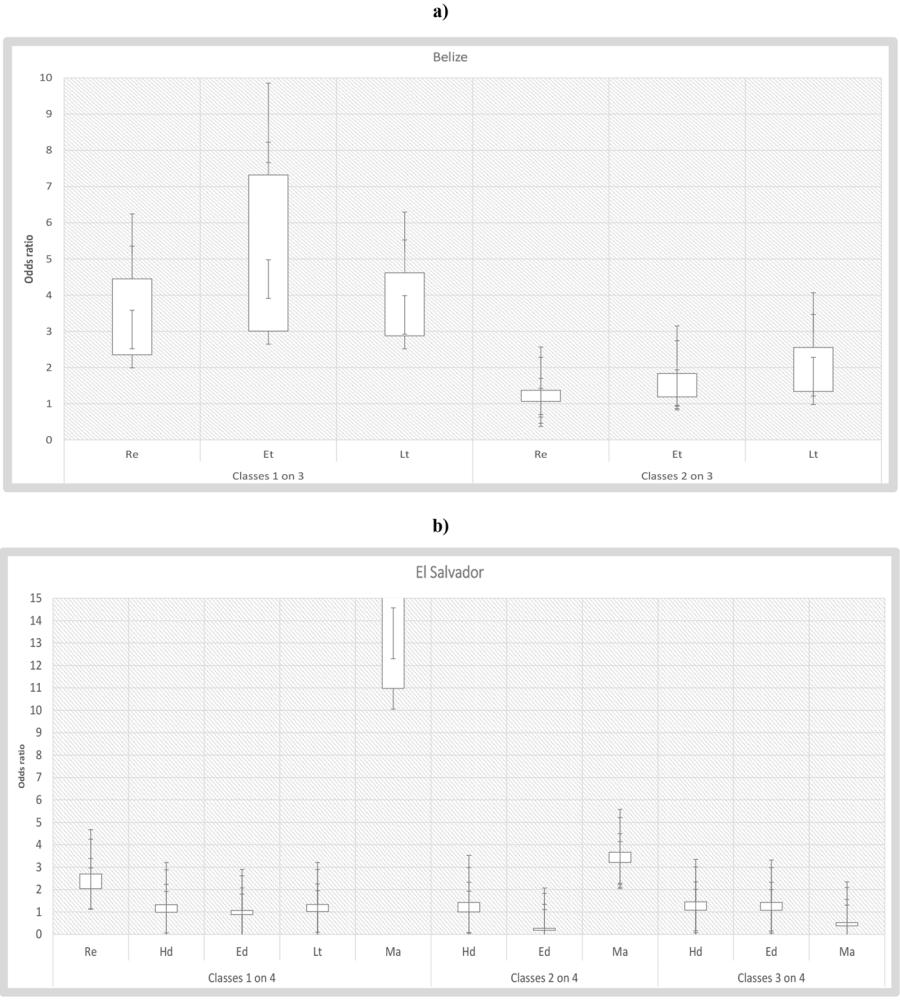

Fig. 2 Odd ratios of experiencing child multidimensional poverty in Belize and El Salvador. Source: Own elaboration based upon the LCA estimated with the MICS data surveys of Belize and El Salvador. *Values are statistically significant at $p < 0.001$

Empirical models have shown that the risks of children being multidimensionally poor are considerably high when living in the southern region of Belize.[30] They present 3.8 times more than non-poor children living in the Northern and Central regions of Belize. These risks are for the latent class of the extreme poor and are considerably higher than those children presenting moderate poverty.[31] The last-mentioned shows 1.5 times higher than non-poor children (Fig. 2a).

Additionally, ethnicity is a factor that clearly determines the risks of children being multidimensionally poor in Belize. Mayan or Garifuna children are on average 5 times more likely to be extreme poor than the non-poor children (the mestizo or creole). The results of the study also show that children of Mayan origin are those who experience extreme poverty to a greater extent in Belize. And OR are 1.9 on average for Mayan or Garifuna children living in moderate poverty.

Similarly, Belizean children living in rural areas are almost four times on average more likely to be poor than non-poor children. The aforementioned results are for children in extreme poverty. And children experiencing moderate poverty are also exposed to this type of poverty when they live in rural areas, almost twice than the non-poor children. Thus, the risks of falling into poverty also depend on the type of locality.

On the other hand, the CLCA model estimated for Salvadoran children shows various socioeconomic determinants that influence the MCP.[32] In this case, young mothers in their age of 15 to 22 years are an important factor determining extreme poverty, the risks are approximately 13 times higher than the children of mothers aged 23 years or older. These are the greatest risks for the Salvadoran extreme poor children. The moderate poor children also show high OR, of 3.5 on average, when their mothers are young. Low poverty does not have substantial differences comparing to the non-poor children in El Salvador.

The type of region is another determinant for children living in extreme poverty in El Salvador. Children from the Western and Eastern[33] regions show the highest OR (2.5) when they live in extreme poverty comparing to the non-poor children living in the central region of this country.

Furthermore, children from poor families in El Salvador present considerable risks of MCP (extreme, moderate or low poverty) when the educational attainment of the head of the family is below compulsory education, or when woman is the head of the household and, when children live in rural areas.[34] All of these factors determine the risks of being multidimensionally poor compared to non-poor children, approximately 1.1 times on average.

[30] The South region is composed of the districts of Corozal and Toledo in Belize.

[31] Previous research showed the highest level of household poverty in southern districts, such as Toledo, at 46% in 2009, comparing to other regions of Belize (Halcrow Group Limited, 2011).

[32] The covariates shown as results for the CLCA models were significant. Ethnicity was not significant in El Salvador and was eliminated from the model for not losing the degrees of freedom and preserve de goodness of fit of the model.

[33] The Western zone of El Salvador is composed by the states of Ahuachapán; Santa Ana and Sonsonate. And the Eastern zone is composed of Usulután; San Miguel; Morazán and La Unión.

[34] The covariate of rural areas was significant for the groups of children living in extreme poverty only.

These results present important advances in the studies of child poverty for Central America, as we acknowledge with the CLCA models that poverty is not only multidimensional, but multifactorial as well. And socioeconomic determinants not only influence the risks of MCP, but also determine the way poverty is stratified. We found two poverty strata in Belize and three in El Salvador, which means that in the last-mentioned country, there are more disparities. These disparities are accentuated when children present at least four of the covariates included in the model (not living in the Central Region of El Salvador; the head of household present a low educational attainment; the head of household is a woman; rural areas and when mothers are very young). All these factors produce risks to present extreme poverty in childhood.

6 Discussion

The core of this study is to establish a comprehensive view to eradicate MCP in Central America from the children's wellbeing approach. It has been seen in this study that a wellbeing approach allows us to consider not only the multiple deprivations that children experience, but also the aspects or factors that impact the risks of experiencing poverty. Scholars who advocate a wellbeing approach claim that not only the standard of living, but also social, cultural, environmental and other aspects determine children's lives and their development (Bronfenbrenner & Morris, 1998).

The studies of Ben Arieh et al. (2014) allow us to understand that the approach to child well-being can also be guided through the consideration of broader types of children's rights, not only those related to material standards, but also those related to wellbeing and development. Based on Ben-Arieh et al. (2014), one of the principles underlying children's rights in the CRC is the active role of children in their lives in society (UN, 1989) and this also represents the 'normative frame of child wellbeing' (Minkkinen, 2013).

So, in terms of social policy, the importance of considering children as citizens in their own right (Hart, 1993) allow them the possibility of demanding their entitlements and allows society and the State to create legal and social policy mechanisms to respect the rights of children (UN, 1989). Therefore, if the purpose is to effectively alleviate poverty, all the ways in which people experience poverty must be considered. Moreover, the inclusion of a comprehensive set of rights is related to the political content based on Robinson (2002) who stated: "*…a human rights approach adds value because it provides a normative framework of obligations that has the legal power to render governments accountable*".

Drawing on these comprehensive insights, the study shows a broader picture of MCP by including several categories of rights, which are often not included in a 'basic floor' of rights, such as deprivation in access to information (measured as deprivation in the access to internet). The inclusion of this indicator in a multidimensional poverty measure is based on Max-Neef et al. (1986) who affirm that economic, social and technological progress implies the production of new satisfiers to fulfil

social needs.[35] In this sense, the need of being communicated should be included in a MCP measure based on a wellbeing approach (Guillén-Fernández, 2023).

Additionally, child development is a dimension of poverty that has often been ignored in MCP measures; but we included it in this research, to show that children have specific needs and therefore, their condition of poverty and lack must be analyzed taking into account the multiple deprivations they experience, such as for example, access to children's toys in the home.

Sudfeld et al, (2015) has revealed in previous studies that domestic violence infringes the child's cognitive and emotional development leading to the deprivation of the children's own well-being. In this research, the indicator of 'yelled at by their parents' produce outcomes with high probabilities of MCP in the El Salvador model.

In line with this type of specific indicators, these countries still present a great challenge in reducing undernutrition and public policies should be aimed at tackling both poverty and malnutrition. Also, reductions in the prevalence of malnutrition will also contribute to reducing child mortality (UNICEF, 2014; Statistical Institute of Belize and UNICEF, 2017).

Moreover, this study has shown that socioeconomic determinants must be taken into account in the measurement of MCP, as these result in understanding the risks of child poverty. This research is based on the arguments of Bronfenbrenner and Morris (1998), Minkkinen (2013) and we have verified that the CLCA models estimated in this research have been an empirical test of the statements of Biggeri and Cuesta (2021) presented in their IFCP model—the factors that interact in the lives of children and influence their standard of living, influence their problems of experiencing MCP as well.

The study shows that there are high risks of Central American children experiencing MCP due to different socioeconomic factors, such as indigenous population, low educational level, young women as heads of households, rural population or children from specific regions of El Salvador and Belize, which also They determine both the degree of presenting MCP and the vulnerability of falling into extreme, moderate or low poverty. These structural factors reinforce the intergenerational transmission of poverty (Bird, 2007).

Giddens (2006) and Schotte et al (2018) have argued that poverty and social stratification also reveal a marked differentiation of social patterns in the structure of a society. The results of the study reveal that there are three strata of MCP in Belize and four strata in El Salvador, which explains greater disparities and deep deprivations in access to children's rights in El Salvador. And its moderate poverty stratum is divided, considering low poverty, this leads to deep disparities or more severe poverty, and it is more difficult for Salvadorans in extreme poverty to get out of it.

This stratification also reveals that inequities have led fewer opportunities to access to decent living conditions (employment, health, education, etc.) and mean

[35] Evidence shows that in the midst of the COVID 19 pandemic, 93% of low-income Salvadoran children lack internet access in their homes. Overall, this type of deprivation is widespread in the Salvadoran population, even for those children who do not experience income poverty, since they show incidences that range between 40 and 60% for different income strata (ECLAC, 2022).

that vulnerable and poor children remain in a life cycle of poverty disadvantage (Jasso-Gutiérrez & López-Ortega, 2014).

Based on this MCP research, Central American countries should conduct updated surveys that can reveal children's current living standards to derive reliable poverty measures for informing social policies. This could help the construction and articulation of child citizenship, as well as respect for children's rights to eradicate MCP and achieve child wellbeing.

7 Conclusion

Therefore, this research concludes with some possible mechanisms to eradicate the MCP based on compliance with the rights of children in Central America for the reduction of child poverty and achieving the children's wellbeing:

1. Constitute and implement legal frameworks and operational mechanisms at the domestic level that incorporate the rights of children established in the UNCRC (UN, 1989).
2. Recognize that poverty is multidimensional and multifactorial, as it is determined by different social, cultural, economic and environmental factors.
3. Build and implement social security schemes and anti-poverty policies based on more comprehensive social policies, in accordance with the provisions of international conventions, national laws and regulations.
4. Establish a commitment among Latin American countries to evaluate social assistance programs and other types of social protection, in accordance with the principle of progressivity established in the UNCRC (UN, 1989).
5. Implement viable protection systems with communities at the local level, to make children's rights effective and to guide their wellbeing.

Appendix

Table 5 Variables

Poverty Dimensions & Variables	Variables Code	Operationalization for code 1 = Deprivation [0 is equal to other case for all variables]:
Individual information		
Nutrition		
Height for age	HA	The observed measure is less than 2 standard deviations
Weight for age	WA	The observed measure is less than 2 standard deviations
Health-care services		
Vaccination	VAC	The child has a vaccination card
Health Care Access	HCA	Health care access at home
Child Development		
Children's toys at home	Bs	The child does not have toys
Shouted at child	Cr	The mother, father or carer have shouted at child
Household information		
Information		
Internet	Int	There is no access to internet at home, school or workplace
TV	TV	There is no access to TV at home
Radio	Ra	There is no access to radio at home
Mobile or telephone	Mo	The mother does not have mobile or telephone at home
Durables and tenency		
Computer or laptop	Comp	There is not computer at home
Vehicles	Ve	There is not any kind of vehicles for the household's members
DVD	DVD	There is not a DVD at home
Fridge	Fd	There is not fridge at home
Washing Machine	Wsh	There is not washing machine at home
Clock	Clk	There is not any clock at home
Bank	Ba	Tenancy of a bank account
Tenency	Tn	Tenancy of the dwelling (owner or renter)
Shelter and facilities		
Walls	Wl	Walls are made of wasting materials
Overcrowding	Ov	A coefficient of 2.5 and more
Fuel	Fl	There is not fuel for cooking at home
Water and sanitation facilities		
Toilet	Tl	There is toilet at the dwelling
Water	Wr	Water supply at home to drink and use

Table 6 Covariates

Covariates' name Country: Belize		
Variables	Code	Operationalization for code 1 = deprived; 0 = non-deprived [Code 1 is associated with higher deprivation, based on evidence shown above]
Region	Re	0 = North and central regions 1 = South region
Ethnicitiy	Et	0 = Creole or mestizo 1 = Mayan or Garifuna
Locality	Lt	0 = Urban 1 = Rural
Mother's educational attainment	Ed	0 = Mandatory education (high school or higher educational attainment) 1 = Below mandatory education (below high school)
Sex of the head of household	Hd	0 = Male 1 = Female
Covariates' name Country: El Salvador		
Variables	Code	Operationalization for code 1 = deprived; 0 = non-deprived [Code 1 is associated with higher deprivation, based on evidence shown above]
Region	Re	0 = Central/Paracentral 1 = Occidental/Oriental (Western and the Eastern regions)
Locality	Lt	0 = Urban 1 = Rural
	Ed	0 = Mandatory education (high school or higher educational attainment) 1 = Below mandatory education (below high school)
Sex of the head of household	Hd	0 = Male 1 = Female
Mother's age	Ma	0 = 23 years or more 1 = 15–22 years

Table 7 Test of multicollinearity: variance inflation factors (VIFs) of the independent variables & correlations

Variables	VIF	HA	WA	HCA	VAC	Cr	Ts	Int	Ra	TV	Mo	Ve	Comp	DVD/Clk	Tn	Fd	Wsh	Ba	Ov	Fl	Wl	Tl	Wr
Belize																							
HA	1.307	1																					
WA	1.235	.460	1																				
HCA	1.490	.266	.314	1																			
VAC	1.503	.210	.429	.517	1																		
Cr	1.032	.310	.103	.109	.037	1																	
Ts	1.233	.223	.104	.150	.122	.514	1																
Int	1.014	.120	.140	.200	.132	.108	.140	1															
Ra	1.262	.154	.139	.243	.102	.158	.127	.430	1														
TV	1.502	.146	.291	.215	.142	.124	.231	.535	.496	1													
Mo	1.377	.157	.233	.116	.115	.036	.182	.613	.464	.599	1												
Ve	1.170	.102	.156	.176	.045	.031	.183	.407	.401	.422	.473	1											
Comp	1.398	.182	.120	.106	.261	.027	.293	.508	.437	.310	.412	.377	1										
DVD/Clk	1.320	.165	.146	.035	.121	.154	.137	.149	.343	.561	.263	.387	.476	1									
Tn	1.104	.132	.127	.005	.007	.040	.013	.231	.187	.197	.217	.255	.302	.421	1								
Fd	1.509	.206	.103	.261	.254	.127	.240	.332	.242	.518	.249	.324	.352	.393	.450	1							
Wsh	1.409	.176	.191	.242	.126	.164	.220	.300	.187	.446	.200	.257	.332	.356	.436	.528	1						
Ba	1.344	.128	.249	.107	.037	.016	.242	.203	.100	.337	.263	.214	.315	.296	.402	.335	.425	1					
Ov	1.239	.117	.272	.137	.131	.171	.223	.216	.210	.269	.154	.217	.246	.141	.116	.334	.360	.465	1				
Fl	1.502	.226	.177	.170	.137	.164	.218	.134	.117	.388	.293	.210	.274	.385	.252	.487	.483	.366	.582	1			
Wl	1.016	.179	.135	.058	.040	.016	.069	.044	.096	.133	.054	.162	.124	.096	.064	.182	.192	.255	.339	.471	1		
Tl	1.409	.232	.122	.393	.159	.058	.208	.019	.173	.371	.239	.273	.400	.180	.163	.456	.373	.307	.503	.460	.361	1	
Wr	1.334	.129	.268	.204	.096	.116	.152	.111	.143	.292	.272	.155	.249	.293	.247	.316	.471	.391	.426	.344	.449	.591	1
El Salvador																							
HA	1.343	1																					
WA	1.355	.490	1																				
HCA	1.039	.454	.415	1																			
VAC	1.050	.415	.407	.685	1																		
Cr	1.023	.270	.360	.340	.110	1																	
Ts	1.075	.170	.321	.309	.170	.671	1																
Int	1.030	.340	.217	.250	.330	.152	.206	1															
Ra	1.107	.224	.111	.330	.278	.163	.264	.410	1														
TV	1.291	.204	.213	.305	.189	.187	.221	.645	.521	1													
Mo	1.079	.325	.226	.321	.195	.206	.298	.604	.632	.578	1												
Ve	1.319	.215	.178	.195	.102	.164	.195	.501	.416	.356	.412	1											
Comp	1.441	.190	.109	.116	.200	.219	.207	.552	.464	.450	.460	.492	1										
DVD/Clk	1.208	.105	.119	.121	.205	.208	.209	.321	.302	.465	.321	.412	.425	1									
Tn	1.064	.115	.107	.136	.129	.164	.169	.265	.236	.210	.123	.314	.413	.315	1								
Fd	1.453	.120	.161	.342	.206	.185	.107	.239	.123	.115	.165	.462	.478	.364	.316	1							
Wsh	1.392	.180	.205	.397	.235	.131	.130	.295	.106	.216	.145	.419	.459	.452	.322	.632	1						
Ba	1.238	.170	.232	.241	.121	.260	.164	.306	.163	.230	.161	.478	.496	.365	.462	.569	.598	1					
Ov	1.133	.145	.195	.189	.142	.220	.174	.297	.185	.116	.175	.314	.212	.264	.260	.360	.374	.394	1				
Fl	1.597	.160	.109	.203	.156	.179	.156	.278	.155	.145	.184	.345	.209	.245	.287	.460	.261	.158	.647	1			
Wl	1.414	.180	.169	.115	.187	.146	.158	.106	.104	.162	.195	.312	.223	.178	.290	.321	.297	.169	.509	.525	1		
Tl	1.546	.240	.245	.226	.196	.130	.194	.189	.134	.195	.141	.247	.163	.189	.294	.211	.284	.196	.356	.401	.406	1	
Wr	1.508	.255	.356	.301	.230	.109	.187	.174	.189	.184	.164	.263	.145	.196	.305	.310	.309	.135	.501	.369	.366	.692	1

Correlation is significant at the 0.05 level (2-tailed)
The highest correlations are highlighted in color by items groups in the top diagonal, based on their theoretical description and classification in Appendix Table 5

Authors' Contributions Not applicable.

Funding This work was supported by UNAM-PAPIIT (Programa de Apoyo a Proyectos de Investigación e Innovación Tecnológica) in the topic of Wellbeing and health from the Social Rights-based approach ("Bienestar en Salud con Enfoque de Derechos Humanos", code IA302322) from the Universidad Nacional Autónoma de México, UNAM, at the Instituto de Investigaciones Económicas (IIEc-UNAM).

Data Availability Not applicable.

Code Availability Not applicable.

Declarations

Conflicts of Interest Not applicable.

References

Abramovich, V. (2006). Los Estándares Interamericanos de Derechos Humanos como Marco para la Formulación y el Control de las Políticas Sociales. *Anuario De Derechos Humanos*. https://doi.org/10.5354/0718-2279.2006.13370

Alin, A. (2010). Multicollinearity. *Wiley Interdisciplinary Reviews: Computational Statistics, 2*(3), 370-374.

Alkire, S. & Foster, J. (2009). Counting and multidimensional poverty measurement, *Documento de trabajo OPHI* No. 32. Diciembre de 2009.

Alkire, S., & Foster, J. (2011). Counting and multidimensional poverty measurement. *Journal of Public Economics, 95*(7–8), 476–487.

Agresti, A. (1990). *Categorical data analysis*. Wiley.

Arbuckle, J. L. (1996). Full information estimation in the presence of incomplete data. In G. A. Marcoulides & R. E. Schumacker (Eds.), *Advanced structural equation modeling* (pp. 243–277). Lawrence Erlbaum.

Baum, M., Schewens, C., & Kabst, R. (2015). A latent class analysis of small firms' internationalization patterns. *Journal of World Business, 50*, 754–768. https://doi.org/10.1016/j.jwb.2015.03.001

Belsky, J., & De Haan, M. (2011). Annual research review: Parenting and children's brain development: The end of the beginning. *Journal of Child Psychology and Psychiatry, 52*(4), 409–428. https://doi.org/10.1111/j.1469-7610.2010.02281.x

Ben-Arieh, A., Casas, F., Frønes I., Korbin, J. E. (2014). Multifaceted concept of child well-being. *Handbook of child well-being. Theories, methods and policies in global perspective*. Springer.

Berlinski, S., & Schady. N. (2015). *Los primeros años. El bienestar infantil y el papel de las políticas públicas*, Banco Interamericano de Desarrollo, Washington, D. C, USA.

Biggeri, M., & Cuesta, J. A. (2021). An integrated framework for child poverty and well-being measurement: Reconciling theories. *Child Indicators Research, 14*, 821–846. https://doi.org/10.1007/s12187-020-09774-0

Bird, K. (2007). The intergenerational transmission of poverty: An overview, Working paper 99, *Chronic Poverty Research Centre*, Overseas Development Institute, London, October 2007.

Boarini, R. & Mira d'Ercole, M. (2006). Measures of Material Deprivation in OECD Countries", *OECD Social, Employment and Migration Working Papers*, No. 37, OECD Publishing, Paris, https://doi.org/10.1787/866767270205.

Bronfenbrenner, U., & Morris, P. A. (1998). *The ecology of developmental processes*. Chicago.

Brooks-Gunn J. & Duncan G. (1997). The effects of poverty on children. *Future Child*, 7:55–71.

Bundy, A. C., Luckett, T., Tranter, P. J., Naughton, G. A., Wyver, S. R., Ragen, J., & Spies, G. (2009). The risk is that there is 'no risk': A simple, innovative intervention to increase children's activity levels. *International Journal of Early Years Education, 17*(1), 33–45. https://doi.org/10.1080/09669760802699878

Celeux, & Soromenho, G. (1996). An entropy criterion for assessing the number of clusters in a mixture model. *Journal of Classification, 13,* 195-212.

Chaudry A. & Wimer, C. (2016). Poverty is not just an indicator: The relationship between income, poverty, and child well-being. *Academic Pediatrics, 16*, S23–S29.

Collins, L. M., & Lanza, T.S. (2010). *Latent class and latent transition analysis: With applications in the social, behavioral, and health sciences*. John Wiley & Sons

Constitute. (1981). *Belize's Constitution of 1981 with Amendments through 2011*, available at: chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.oas.org/dil/Constitution_of_Belize.pdf. Accessed 9 Oct 2023.

Dawes, A. (2006). A Rights-based approach to monitoring Child Wellbeing and Protection. Child Youth Family & Social Development, Human Sciences Research, Seminar: Care and protection of children in crisis affected countries: A good practice-policy change initiative, Public Health Programme on Forced Migration & Health Mailman School of Public Health Columbia University, 27–28 April 2006.

Delamonica, E., & Minujín, A. (2007). Incidence, depth and severity of children in poverty. *Social Indicators Research, 82*(2), 361–74.

Delamonica, E. (2020). Overcoming social exclusion in education: Reflections on policy challenges. In G. Koehler, A. D. Cimadamore, F. Kiwan, & P. M. Monreal Gonzalez (Eds.) *The politics of social inclusion: Bridging knowledge and policies towards social change*. CROP.

Despouy, L. (1996). Rapport final sur les droits de l'Homme et l'extrême pauvreté, Rappourteur de la sous commission de la lutte contre les mesures discriminatoires et de la protection des minorités du Conseil Économique et Social de l´ONU. Quarantehuitième session, UN Document E/EC.4/Sub.2/1996/13, 28 June1996.

DOF (Diario Oficial de la Federación) (2004). Ley General de Desarrollo Social. Retrieved 09.10.23, from https://dof.gob.mx/nota_detalle.php?codigo=676752&fecha=20/01/2004#gsc.tab=0

Doyal, L., & Gough, I. (1991). *A theory of human need*. Macmillan.

Duncan, G. J., & Brooks-Gun, J. (2003). Family poverty, welfare reform and child development. *Child Development, 71*(1), 188–96. https://doi.org/10.1111/1467-8624.00133

ECLAC (Economic Commission for Latin America and the Caribbean) (2007). *Estrategia Energética Sustentable Centroamericana 2020* (LC/MEX/L.828), United Nations, Mexico City, 115 p.

ECLAC (2020). *Aprender de la historia, atender la emergencia, repensar el futuro. México, Centroamérica y el Caribe frente a la pandemia: diagnóstico y perspectivas* (LC/MEX/TS.2020/17/Rev.2), CEPAL y Naciones Unidas, Ciudad de México, México.

ECLAC (2021). *Comprehensive Development Plan for El Salvador, Guatemala, Honduras and south-southeast Mexico*, vol. 1 (LC/TS.2021/7), United Nations, Santiago.

ECLAC (2022). *Panorama Social de América Latina y el Caribe, 2022* (LC/PUB.2022/15-P), Naciones Unidas, Santiago, Chile.

ECLAC-UNICEF (2010). *Child poverty in Latin America and the Caribbean*, United Nations, Santiago de Chile, Chile.

ECLAC-UNICEF (2020). Social protection for families with children and adolescents in Latin America and the Caribbean. An imperative to address the impact of COVID-19. *COVID-19 Report*, United Nations, December 2020.

ECOSOC (United Nations Economic and Social Council) (1998), *Statement of commitment for action to eradicate poverty adopted by administrative committee on coordination*, May 20, 1998, Press release ECOSOC/5759. Retrieved 09.10.23, from https://press.un.org/en/1998/19980520.eco5759.html

Ennew, J. (1999). Children's rights indicators. In E. Verhellen (Ed.), *Understanding children's rights: Collected papers presented at the fourth International Interdisciplinary Course on Children's Rights*, December. Ghent Papers on Children's Rights No. 5. Belgium: University of Ghent.

Fernandez, E. (2014). Early childhood: Dimensions and contexts of development and well-being. In: Ben-Arieh, A., Casas, F., Frønes, I., & Korbin, J. (Eds.), *Handbook of child well-being*. Springer. https://doi.org/10.1007/978-90-481-9063-8_65

Fredricks, J. A., & Eccles, J. S. (2008). Participation in extracurricular activities in the middle school years: Are there developmental benefits for African American and European American youth? *Journal of Youth and Adolescence, 37*(9), 1029–1043. https://doi.org/10.1007/s10964-008-9309-4

Garbarino, J. (2014). Ecological Perspective on Child Well-Being. In A. Ben-Arieh, F. Casas, I. Frønes, & J.E. Korbin (Eds.), *Handbook of child wellbeing. Theories, methods and policies in global perspective* (pp. 1365–1384). Springer.

García, S., & Ritterbusch, A. (2015). Child poverty in Colombia: Construction of a multidimensional measure using a mixed-method approach. *Child Indicators Research, 8*, 801–23. https://doi.org/10.1007/s12187-014-9274-2

Giddens, A. (2006). *Sociology* (5th ed.). Polity Press.

González, Ll., Estarlich, M., Murcia, M., Larrañaga, I., Barreto, F., Santa-Marina, L., Arranz, E., Cirugeda, L., Simó, S., & Rebagliato, M. (2021). Risk of child poverty and social exclusion in two Spanish regions: social and family determinants. *Gaceta Sanitaria, 35*(3), 216–223. https://doi.org/10.1016/j.gaceta.2019.11.002

Gordon, D. (2008). Children, policy and social justice. In *Social justice and public policy. Seeking fairness in diverse societies*. The Policy Press.

Gordon, D. (2010). Child poverty in the developing world. In A. Walker, D. Gordon, R. Levitas, P. Phillimore, C. Phillipson, M. E. Salomon, & N. Yeates (Eds.), *The Peter Townsend Reader*.The Policy Press.

Gordon, D., Nandy, S., Pantazis, C., Townsend, S., & Pemberton, P. (2003). *Child poverty in the developing world*. The Policy Press.
Government of Belize (2014), *Poverty action plan*. Basic Needs Trust Fund/Caribbean Development Bank, Sayan Consulting, Belmopan.
Guillén-Fernández, Y. B. (2023). *Breaking the poverty code. An integrative approach to measuring multidimensional poverty in Mexico* (p. 154). Emerald Publishing. https://doi.org/10.1108/9781837535200
Guillén-Fernández, Y. B. (2017). Children rights: A framework for the construction of social policy and for the eradication of poverty in Latin America and the Caribbean. In A. Minujín, M. González-Contró, & R. Mercer (Eds.), Tackling child poverty in Latin America, rights and social protection in unequal societies. *Crop International Poverty Studies*, 2: 161–185. Ibidem Verlag Press.
Guillén-Fernández, Y. B. & Vargas-Chanes, D. (2021). Multidimensional child poverty from the child rights-based approach: A latent class analysis to estimating child poverty groups in Mexico. *Child Indicators Research, 14*(5): 1949–1978. https://doi.org/10.1007/s12187-021-09840-1
Guio, A.-C., Marlier, E., Gordon, D., Fahmy, E., Nandy, S., & Pomati, M. (2016). Improving the measurement of material deprivation at the European Union level. *Journal of European Social Policy, 26*(3), 219–333. https://doi.org/10.1177/0958928716642947
Halcrow Group Limited. (2011). Government of Belize and the Caribbean Development Bank: Country Poverty Assessment, Final Report, Volume 1. Main Report, August 2010. Halcrow Group Limited.
Han, C.-K., & Hong, S.-L. (2011). Assets and life satisfaction patterns among Korean older adults: Latent class analysis. *Social Indicators Research, 100*, 225–240. https://doi.org/10.1007/s11205-010-9613-8
Hart, R.A. (1993). La participación de los niños, de la participación simbólica a la participación auténtica. *Innocenti Essay,* No. 4, UNICEF.
Huston, A. C. (2002). Reforms and child development. *Future Child, Winter-Spring, 12*(1), 58–77.
ILO, IPEC and Statistical Institute of Belize, 2015ILO, IPEC and Statistical Institute of Belize (International labour Organization & International Programme on the Elimination of Child Labour). (2015). *Report on the national child activity survey*. *Belize 2013*. ILO.
INSP (Instituto Nacional de Salud Pública) & UNICEF (The United Nations Children's Fund). (2016). *Encuesta Nacional de Niños, Niñas y Mujeres, 2015, Resultados Principales*. Retrieved 04.03.2023, from http://mics.unicef.org/surveys
Jasso-Gutiérrez, L., & López-Ortega, M. (2014). El impacto de los Determinantes Sociales de la Salud en los niños. *Boletín Médico del Hospital Infantil de México, 71*(2), 117–125.
Law Revision Commissioner (2000). *Belize families and children act, Chapter 173 of the Laws of Belize*. Retrieved 29.06.2023, from https://www.belizejudiciary.org/wp-content/uploads/2012/10/cap173-Families-and-children-act.pdf
Lazarsfeld, P., & Henry, N. (1968). *Latent structure analysis*. Houghton-Mifflin.
Lister, R. (2004). *Poverty*. Polity Press.
Lo, Y., Mendell, N. R., & Rubin, D. B. (2001). Testing the number of components in a normal mixture. *Biométrika, 88*(3), 767–778.
Max-Neef, M., Elizalde A., Hopenhayn, M. (1986). "Desarrollo a Escala Humana. Una opción para el futuro", F. Herrera, H. Zemelman, J. Jatobá & L. Weinstein (contributors), *Development dialogue*, Special Issue, CEPAUR & Fundación Dag Hammarskjöld, Santiago, Chile. Retrieved 01.02.2024, from http://habitat.aq.upm.es/deh/adeh.pdf
Minkkinen, J. (2013). The structural model of child well-being. *Child Indicators Research, 6*, 547–558, https://doi.org/10.1007/s12187-013-9178-6
MINSAL-INS (Ministerio de Salud-Instituto Nacional de Salud) & UNICEF (2014). *Encuesta Nacional de Salud de Indicadores Múltiples por Conglomerados (ENS)*, Dirección General de Estadísticas y Censos (DIGESTYC), Banco Mundial, Banco Interamericano y Agencia Española de Cooperación para el Desarrollo, San Salvador. El Salvador.
Mistry, R. S., Vandewater, E. A., Huston, A. C., & McLoyd, V. C. (2002). Economic well-being and children's social adjustment: the role of family processes in ng and children's social adjustment: the role of family processes in an ethnically diverse low income sample. *Child Development, 73*, 935–951.
Mora Téllez, R. (2019). A quick end to a long story: Networks and Mexican migration during the great recession. *The Annals of the American Academy of Political and Social Science, 684*(1), 227–240. https://doi.org/10.1177/0002716219856562

Naciones Unidas (2016). Documento del programa para el país. Belice. Consejo Económico y Social (Ecosoc) de la Organización de las Naciones Unidas y el Fondo de las Naciones Unidas para la Infancia, E/ICEF/2016/P/L.22, 5 de agosto de 2016, available at: https://undocs.org/Home/Mobile?FinalSymbol=E%2FICEF%2F2016%2FP%2FL.22&Language=E&DeviceType=Desktop&LangRequested=False. Accessed 21 May 2024.

Nunnally, J. (1978). *Psychometric theory*. McGraw-Hill.

Nylund, K. L., Asparouhov, T., & Muthén, B. O. (2007). Deciding on the number of classes in latent class analysis and growth mixture modeling: a monte carlo simulation study. *Structural Equation Modeling, 14*(4), 535–569. https://doi.org/10.1080/10705510701575396

OHCHR (1966). *International covenant on economic, social and cultural rights, United Nations human rights*. Office of the High Commissioner, Retrieved 16.10.23, from https://www.ohchr.org/en/instruments-mechanisms/instruments/international-covenant-economic-social-and-cultural-rights

Pautassi, L., & Royo, L. (2012). *Enfoque de derechos en las políticas de infancia: indicadores para su medición*. Documentos de proyectos núm. 513, UNICEF & ECLAC. Retrieved 10.03.2023 from https://repositorio.cepal.org/bitstream/handle/11362/4044/1/S1201027_es.pdf

Paz, J. A. (2016), *Bienestar y pobreza en niñas, niños y adolescentes en Argentina* (pp. 1–58). UNICEF. Retrieved 01.03.2024, from https://www.unicef.org/lac/informes/bienestar-y-pobreza-en-ninos-ninas-yadolescentes-en-argentina

Pemberton, S., Gordon, D., Nancy, S., Pantazis, C., & Townsend, P. (2007). Child rights and child poverty: Can the international framework of children's rights be used to improve child survival rates? *PLOS Medicine, 4*(10), 1567–1570.

Pemberton, S., Gordon, D., & Nandy, S. (2012). Child rights, child survival and child poverty: the debate. In A. Minujín, & S. Nandy (Eds.), *Global child poverty and wellbeing. Measurement, concepts, policy and action*. The Policy Press.

Pérez, T. (2016). Determinants of child poverty in Uruguay. The impact of gender inequality, Master thesis, Master in Economic Development and Growth, Lund University, School of Economics and Management, June 2016. www.ehl.lu.se

PNUD (Programa de las Naciones Unidas para el Desarrollo) (2010). *Informe Regional sobre Desarrollo Humano para América Latina y el Caribe 2010: Actuar sobre el futuro: romper la transmisión intergeneracional de la desigualdad*, 1a. ed. San José, Costa.Rica.

Pomati, M., & Nandy, S. (2019). Assessing progress towards SDG2: Trends and patterns of multiple malnutrition in young children under 5 in West and Central Africa. *Child Indicators Research, 13*, 1847–1873.

Ringen, S. (1985). Towards a third stage in the measurement of poverty. *Acta Sociologica, 28*(2), 99–113.

Rivas-Valdivia, J.C., & Sánchez-Vargas, A. (2023). Economic divergence and the role of disasters in Mexico and Central America. *Disaster Advances, 16*(5), 1–9. https://doi.org/10.25303/1605da01009

Robinson, M. (2002). Statement by Mary Robinson, United Nations High Commissioner for Human Rights, at the World Summit on Sustainable Development plenary session, http://www.un.org/events/wssd/statements/unhchrE.htm.

Schotte, S., Zizzamia, R., & Leibbrandt, M. (2018). A poverty dynamics approach to social stratification: The South African case. *World Development, 110*, 88–103. https://doi.org/10.1016/j.worlddev.2018.05.024

Speth, J. G. (1998). Poverty: A denial of human rights. *Journal of International Affairs, 52*(1), 277–292.

Statistical Institute of Belize & UNICEF (2017). *Belize Multiple Indicator Cluster Survey, 2015–2016, Final Report*. Statistical Institute of Belize and UNICEF Belize.

Stewart, F. (2013). Approaches towards Inequality and Inequity: Concepts, measures and policies, *Office of Research Discussion Paper* No.2013-01, UNICEF Office of Research.

Sudfeld, C. R., McCoy, D. C., Danaei, G., Fink, G., Ezzati, M., Andrews, K. G., & Fawzi, W. W. (2015). Linear Growth and child development in low- and middle-income countries: A meta-analysis. *Pediatrics, 135*(5), 1266–1275.

Titmuss, R. M. (1962). *Income, distribution and social change: A study in criticism*. George Allen & Unwin Ltd.

Townsend, P. (1979). *Poverty in the United Kingdom: A survey of household resources and standards of living*. Harmondsworth: Penguin Books.

Tuñón, I., Poy, S., & Coll, A. (2015). *Pobreza infantil en las ciudades de la Argentina 2010–2014: Diferentes mediciones de la pobreza infantil y una propuesta multidimensional desde un enfoque de derechos*. Edición especial Educa, Ciudad Autónoma de Buenos Aires, Argentina.

UN (United Nations) (1948). *Universal Declaration of Human Rights* (UDHR), New York, NY.

UN (1989). *Convention on the rights of the child*. UN Department of Publications.

UN (1995). *The Copenhagen declaration and programme of action: World summit for social development 6-12*, March 1995. United Nations Department of Publications.

UN (2023). UN Treaty Body Database. Retrieved June 30, 2023 from https://tbinternet.ohchr.org/_layouts/15/TreatyBodyExternal/Home.aspx?lang=En

UN & ECLAC (2018). The 2030 Agenda and the Sustainable Development Goals, An opportunity for Latin America and the Caribbean, Santiago: United Nations Publication, available at: https://repositorio.cepal.org/bitstream/handle/11362/40156/25/S1801140_en.pdf. Accessed 27 Oct 2020.

UNECE (United Nations Economic Commission for Europe) (2020). Poverty Measurement: Guide to Data Disaggregation. Conference of European Statisticians, Sixty-eighth plenary session. Geneva: UNECE. Retrieved July 11, 2020, from http://www.unece.org/fileadmin/DAM/stats/documents/ece/ces/2020/09Rev1_Poverty_Measurement_Guide_after_consultation.pdf

UNGA (United Nations General Assembly) (2006). *Promotion and protection of the rights of children: Report of the Third Committee*. United Nations.

UNGA (2023). International covenant on economic, social and cultural rights, General Assembly resolution 2200A (XXI), 16 December 1966, Retrieved 01.07.2023, from https://www.ohchr.org/en/instruments-mechanisms/instruments/international-covenant-economic-social-and-cultural-rights

UNICEF (2004). The State of the World's Children 2005. Childhood under threat. UNICEF House.

UNICEF (2014). *2014 Informe de Situación de la Niñez y Adolescencia en el Salvador.* UNICEF, CONNA, DIGESTYC.

UNICEF (2015). *Medición Multidimensional de la Pobreza en el Salvador. Una mirada a las familias con niñas, niños y adolescentes*. Secretaría Técnica y de Planificación de la Presidencia, Gobierno de El Salvador; Le Gouvernement du Grand-Duché de Luxembourg, UNICEF.

UNICEF (2018). *Informe Anual, México 2018*. UNICEF.

UNICEF (2021). Technical Briefing Note 2: The Dimensions of Child Poverty, retrieved from https://data.unicef.org/wp-content/uploads/2021/12

UNICEF (2023). Social Protection. The Challenge. Retrieved 09.10.23 from https://www.unicef.org/belize/social-protection

UNICEF & CONEVAL (2013). *Pobreza y Derechos Sociales de niñas, niños y adolescentes de México, 2008–2010*. México, D.F, UNICEF México y CONEVAL.

UNICEF & CONEVAL (2019). *Pobreza infantil y adolescente en México 2008–2016*. UNICEF.

UNICEF, Government of Belize; UNFPA (United Nations Population Fund) & NCFC (Nutritional Committee for Families and Children) (2020). *Road Map to End Child Marriage & Early Unions in Belize*. UNICEF.

UTE (2009). Ley de protección integral de la niñez y adolescencia LEPINA. Comisión Coordinadora del Sector de Justicia Unidad Técnica Ejecutiva (UTE), San Salvador, available at: https://escuela.fgr.gob.sv/wp-content/uploads/Leyes/Leyes-2/LEY-DE-PROTECCION-INTEGRAL-DE-LA-NI%c3%91EZ-Y-ADOLESCENCIA.pdf. Accessed 10 Nov 2020.

Vermunt, J.K., & Magidson, J. (2002). Latent class cluster analysis. In J. Hagenaars, & A. McCutcheon (Eds.), *Applied latent class models* (pp. 89-106). Cambridge University Press.

Villanger, E. (2008). Cash Transfers contributing to social protection: A Synthesis of Evaluation Findings, Synthesis Report 2/2008, Oslo: Norad (Norwegian Agency for Development Cooperation).

Wagmiller, R. L., & Adelman, R. M. (2009). Childhood and intergenerational poverty. The long-term consequences of growing up poor, reports, Columbia. *Academic Commons*. https://doi.org/10.7916/D8MP5C0Z

WHO (World Health Organization). (2010). *Country Profile Indicators, Interpretation Guide, Nutrition Landscape, Information System (NLIS)*. World Health Organization (WHO).

Yeung, W. J., Linver, M. R., & Brooks-Gunn, J. (2002). Money matters for young children's development: Parental investment and family processes. *Child Development, 73*, 1861–1879.

Zhao, B., Guo, J., He, Q., Jiang, L., & Hu, W. (2023). School bullying victimization types of primary school students and associations with school adaptation: A latent profile analysis. *Child Indicators Research, 16*, 755–775. https://doi.org/10.1007/s12187-022-09995-5

Authors and Affiliations

Yedith B. Guillén-Fernández[1]

✉ Yedith B. Guillén-Fernández
yedith@comunidad.unam.mx

[1] Instituto de Investigaciones Económicas, Universidad Nacional Autónoma de México, UNAM, Mexico City, Mexico