The Resilience of Ethiopian Children:

The Role of Psychosocial Competences in Mediating the Relationships

Between Risk Factors and Developmental Outcomes

By

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SECTION ONE: THE DISSERTATION OVERVIEW

The dissertation aimed to explore the resilience of Ethiopian children facing adverse socioeconomic and political conditions and understand the factors influencing their developmental trajectories and well-being. The study conducted a comprehensive examination of the resilience of Ethiopian children growing up in adverse socioeconomic and political environments. Despite facing immense challenges, including poverty, limited access to education, child labor, malnutrition, health issues, early marriage, female genital mutilation (FGM), political instability, natural disasters, and discrimination, some Ethiopian children managed to achieve positive developmental outcomes. The research sought to understand how these children navigate their circumstances and identified factors that contribute to their ability to thrive and succeed against all odds.

The research utilized data from the older cohort of 814 children collected through the Young Lives survey in 2013 (Round 4) and 2016 (Round 5), when the children were approximately 15 and 22 years old, respectively. The study employed Structural Equation Modeling (SEM) to examine relationships between various variables, including child-level protective/risk factors, psychosocial competence, and well-being. The SEM analysis provided valuable insights into the complex interplay of variables influencing child development. Despite challenges in constructing composite indices and investigating causal relationships, SEM proved instrumental in understanding the intricate relationships between variables and shedding light on the factors shaping children's developmental trajectories in adverse environments.

The research addressed three main research questions: (1) whether the empirical evidence supports the bioecological framework for developmental trajectories among Ethiopian children, (2) whether psychosocial competence mediates the relationship between childhood risks and

developmental outcomes, and (3) to what extent specific child characteristics (gender and psychosocial factors) collectively affect the well-being of these children.

The study found that child-level protective/risk factors significantly predicted psychosocial competence, and the Microsystem had a significant influence on a child's development, but the direct effect of psychosocial competence on well-being was not significant. By identifying child-level protective/risk factors and their interactions with the immediate environment, the research highlights the resilience of some children despite adversities. This knowledge can inform interventions and policies to foster resilience and improve well-being in similar contexts. Policymakers and practitioners can use this information to design targeted interventions addressing child-level factors such as poverty and violence, which impact psychosocial competence and well-being in adverse environments.

The study highlights the significance of the Microsystem in child development interventions, emphasizing the importance of considering the ecological context. Although psychosocial competence plays a minor role, it presents opportunities for empowering interventions through school-based and family programs. The study calls for further methodological refinements and mixed methods to better understand dynamic developmental trajectories. Overall, these findings inform evidence-based social work practice and policies to address the unique needs of Ethiopian children facing challenges. These results contribute significantly to our understanding of the factors influencing the well-being and development of Ethiopian children facing challenges, highlighting the resilience of some children in adverse conditions.

As the research falls within the purview of social work's current concerns, it aligns with the profession's commitment to ensuring healthy youth development, reducing extreme economic inequality, and achieving equal opportunity and justice for all people. The findings will inform social workers to critically assess their clients' personal strengths within the context of their respective environments when devising interventions, aligning with the NASW Codes of Ethics.

Overall, the study contributes to our understanding of the factors influencing the well-being and development of children growing up in adverse environments. It emphasizes the significance of the individual's interactions with their environment, as well as the role of protective/risk factors in shaping psychosocial competence and well-being. The findings call for continued efforts to refine research methods to better capture the complexities of children's developmental trajectories over time, ultimately supporting interventions and policies that promote the resilience and well-being of children.

In conclusion, the research offers valuable insights into the factors that shape the well-being and development of Ethiopian children facing adversity. By utilizing SEM, the study unveils the complex relationships between variables, revealing the influence of child-level protective/risk factors and the Microsystem on psychosocial competence and developmental outcomes. These findings support the goal of social work in promoting general welfare and respecting diversity, advocating for tailored interventions and policies that nurture resilience and well-being among children in challenging environments. Nonetheless, the study acknowledges the need for further methodological improvements, aiming to deepen the understanding of these children's experiences and contribute to meaningful change in social work practice and policy in Ethiopia.

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SECTION TWO: THE STUDY PROBLEM

This study explores the plight of Ethiopian children who face adverse socioeconomic and political conditions in their country. With low political and economic freedom, chronic droughts, widespread poverty, and limited access to basic services, Ethiopian children are born into challenging circumstances. High rates of child marriage, infant mortality, malnutrition, and child labor further compound their struggles. Despite government initiatives and international aid, the impact has been limited. The objective of this study is to comprehensively examine the developmental trajectories of Ethiopian children within their micro, mezzo, and macro systems, identify key areas for targeted interventions, and highlight the remarkable resilience exhibited by those who succeed despite formidable obstacles. By adopting a strength-based approach, the research seeks to illuminate the lived experiences of these children and provide insights to inform effective interventions, all while upholding the values of social work in promoting general welfare and respecting cultural diversity.

2. The Context

2.1.1. The Country

Ethiopian children are born into unfavorable socioeconomic and political environments that not only make it difficult for them to live decent lives, but also cast a shadow over their future prospects. According to (Freedom House, 2022) the country’s political rights and civil liberties are abysmal with an aggregate score of 23%; one of the lowest in the world. With respect to economic freedom, Ethiopia's scored 49.6, and ranked 35th out of 47 Sub-Saharan African countries with an overall score lower than regional and global averages. This places the country among the least free economies mired by pervasive corruption, weak rule of low and

judicial effectiveness in protecting property rights, business, and labor freedoms (The Heritage Foundation, 2022)

Because of climate change, Ethiopia is a chronically drought-prone country. Its predominant rain-fed agriculture, responsible for the livelihood of 85% of the population, falls under the whims of nature leading to severe food-insecurity and widespread hunger. With a significant drop in food production and rise in food prices, household food insecurity has increased, putting 23 million Ethiopians in need of humanitarian aid.(OCHA, 2022). With a score of 26.2 in the 2021 Global Hunger Index, and ranking 92nd out of the 107, hunger in Ethiopia is at serous concern (Concern Worldwide and Welthungerhilfe, 2021). Ethiopia is ranked 173 out of 189 countries and territories in the Human Development Index (HDI), which measures long-term progress in three basic dimensions of human development: a long and healthy life, access to knowledge, and a decent standard of living.(UNDP, 2020b)

Nearly 70% of the population is multidimensionally poor.(UNDP, 2020a). These rating are the result of the country's extremely low levels of achievements in all dimensions of poverty and their respective indicators, including health (nutrition and child mortality), education (school attendance and years of schooling, and living standards (access to drinking water, electricity and sanitation, as well as housing and other assets (Alkire et al., 2017). Notably, while 39.1% of the population have access to clean drinking water, only 26% of rural households have access to electricity.

Ethiopia is one of the largest recipients of development assistance from multilateral institutions. Even though Ethiopia received $5.3 billion from international donors in 2020 (World Bank, n.d.), representing 50 to 60 percent of its national budget, development aid not only failed to have a positive impact on major macroeconomic variables, but there is no systematic and

sustained link between growth, investment, and. Instead, rapid aid inflow have brought adverse effects of rising inflation, appreciation of local currency (Geda & Tafere, 2011, p. 30) and propping up the repressive political structure. (Frederic Mousseau & Melissa Moore, 2013)

2.1.2. The Children

The plight of Ethiopian children begins even before they are born. Nearly 60% of women (aged 15-49 years) do not receive the recommended antenatal care during pregnancy. Only 34% received postnatal care within 2 days of giving birth. 35% the percentage of newborns who have a postnatal contact with a health provider within 2 days of delivery is 35%. Less than half of deliveries attended by skilled health personnel. Pregnancy-related mortality ratio (PRMR), which is deaths of women during pregnancy and delivery, and two months after delivery was 401 per 100,000 live births in 2020. Most children are born at home, and only 26% of babies are delivered in a health facility, and 35% of newborns have a postnatal follow-up with a health provider within 2 days of delivery. Ethiopia has an infant mortality rate of 35 children per 1.000 live births. The mortality rate for under-5 years old is 49 deaths per 1,000 live births. In this connection, 1 in every 20 Ethiopian child dies before celebrating his/her fifth birthday. While the under-five mortality rate for girls is 43 deaths per 1,000 live births, the rate for boys is 54 deaths per 1,000 live births. (UNICEF, 2020). One third of the infant and toddlers received immunization against major childhood diseases such as polio. Moreover, only 4% percent of children ages 6-23 month are fed according to recommended practices, and the percentage of children ages 6-59 months who were anemic, underweight and wasting were 44%, 29% and 10% respectively (Berhane, Abay, & Woldehanna, 2015) These resulted in one of the highest stunting rates of 38.4% for children below the age of 5 (Global Hunger Index, 2018)

Although Ethiopia's family law specifies marriage to occur between consenting spouses, arranged marriage and forced abduction are rampant. Even more alarming is the preponderance of child marriage. According to a survey conducted in 2011, nearly 7% of girls were married before they were 10 years old and another 27% were married when they were between the ages of 11 and 14 (Marshall, Lyytikainen, & Jones, 2016, p. 15) In addition, 13% of girls between the ages of 15-19 are either pregnant or already mothers with their first child. Neonatal mortality of children born to teen mothers is nearly 50% higher than infants born to mothers in their 20s"(Marshall et al., 2016, p. 27)

Early childbearing is rampant where one in five women (aged 20-24 years) gave birth before age 18 (UNICEF, 2020). Family pressure and traditional practices of child marriage "negatively affect the physical, sexual or psychological well-being, human rights and socio-economic participation of women and children" (Marshall et al., 2016, p. 9) Moreover family wealth or poverty have considerable influence that often make marriage an economic transaction. (Camfield & Tafere, 2011) The ensuing "early sexual debut and pregnancy are said to perpetuate the feminization of poverty by preventing girls from developing social capabilities such as educational and occupational skills"(Camfield & Tafere, 2011, p. 15)

Female genital mutilation is another harmful practice that affects a sizeable proportion of girls and women in Ethiopia. Forty seven percent of adolescent girls aged 15 to 19 have undergone genital mutilation. UNICEF (2020). Of the estimated population of 121 million in 2022, nearly 39% are under the age of 15. Young age (0-14) dependency ratio per 100 working age population exacerbating the pressure on the productive population to support the economically dependent.

Only 51% of children attend classes before the official primary school entry age and the net attendance rate for children of primary school age is 68%. Completion rate for children of

primary school age is 47 % (UNICEF, 2020). Contrary to the Ethiopian labor law that prohibits child labor, community norms dictate children as young as 5 years to participate in some sort of household chore such as fetching water and firewood, cattle herding, crop protection etc. “Indeed, children's productivity often constitutes a vital component of household survival strategies, [and] each working child has been shown to contribute from 4% to 7% of household’s income in rural areas”(Guarcello & Rosati, 2007, p. 7) Consequently, the high demand for labor negatively affects school enrolment where primary and secondary school enrolments rates are only 40% and 15% respectively. (Central Statistical Agency, 2017) These on the other hand, limit the skill set most young people required to join the labor force. The ministry of Labor and social affairs estimates some 150,000 children live on the streets. However, aid agencies estimate that the problem may be far more serious, with nearly 600,000 street children country-wide and over 100,000 in Addis Ababa (Ayenew et al., 2020)

There are, however, considerable rural-urban divide and gender disparities. For instance, “63% of women in Ethiopia are married by age 18 compared to 14% of men” (Marshall et al., 2016, p. 8). Girls are more responsible for domestic labor and are twice as likely as boys to report feeling social isolation. Of children aged 12-14 years, 12.5% of boys but 17.2% of girls do not live with their parents reflecting the greater likelihood of girls migrating to other areas seeking domestic work opportunities. Yet, the ratio of female to male youth unemployment rate is 1.45.

2.1.3. Purpose

As stated in the preceding paragraphs, Ethiopian children are born and raised in an unforgiving environment rife with insurmountable misfortunes. Despite the enormous adversity, the children survive, grow into adults, procreate, and nurture the next generation necessary for the survival of the society. These do not occur in a vacuum and nor can be attributed to miracles,

happenstance or paradoxical reactions to the situation. (Camfield, 2012). Instead, we must appreciate that the instinct to survive is inherent in human nature. People in general possess attributes not only to adapt but also shape their environment; to enhance chances for their very survival and reproduction. The latter, "remain the leading influences in the biological and chemical impulses that dictate and control many of our actions and behaviors" (Crick, 2013, p. 5). Moreover, "Even alongside deprivations, poor men, women and children are able to achieve some elements of what they conceive of as wellbeing, ….without which their lives would be unbearable" (Gough et al., 2006, pp. 3–4) .

Meanwhile, the government's initiatives to address these problems have barely marked a dent on the situation. The influx of large sums of funds from the international community were not effective either. (Geda & Tafere, 2011) argue that Official Development Assistance (ODA) flows would have been more effective had they been directed to sectors such as agriculture, industry, and infrastructure instead of concentrating on investment on the 'social sectors' (education, health, vulnerability etc.) This might be true from macroeconomics standpoint. But a prudent approach would be to expand our understanding of the synergies of the entire system from macro down to the targeted children before committing resources. It is also very important to note that human development transcends mere economic concerns and incorporate "the organized pursuit of wellbeing including wider ideals such as participation and freedom" (Gough et al., 2006, pp. 3–4), and related universal basic human needs of protection, affection, understanding, leisure and identity (Ekins & Max-Neef, 2006, p. 209)

The major purpose of the study was therefore to explore the developmental trajectories of Ethiopian children within the context of their respective micro, mezzo and macro systems, and how these systems collectively influence the wellbeing of the children. Because children face

multiple adversities at each level, often feeding off each other, multidimensional indices will be used to evaluate the strength and weaknesses of each system, and identify possible targets for further investigation. Prioritization and targeted intervention are critical in meeting the needs of resource-poor countries like countries, such as Ethiopia, without jeopardizing the efficacy of the already meager investment. Secondly, instead of focusing on their deficiencies, the study sought out children who have succeeded "against all odds." Notwithstanding their early childhood experiences, how their personal attributes contributed to relatively better outcomes that shaped their adolescent were examined. The lived experiences of these children can provide useful lessons, which can then be used to develop appropriate intervention strategies to effect change at a relatively low cost.

The strength-based approach, consistent with the core values of social work, recognizes that individuals possess intrinsic abilities to endure challenges and adapt to their circumstances. It emphasizes enhancing resources, capabilities, support systems, and motivations to promote well-being in the face of adversity. This perspective is practiced by various helping professions and is particularly important in social work, where the dignity and worth of each individual are affirmed, and clients are encouraged to develop capacities that align with their unique needs and circumstances. (Russell, 2008) By focusing on individuals' strengths and empowering them to overcome challenges, social workers can facilitate positive change and support the well-being and resilience of those they serve.

As stated clearly in the permeable of NASW Code of Ethics and its standards regarding responsibilities to the broader society, social work is committed to engaging in activities that promote the general welfare of society, including facilitating public discussions, education, research, and evaluation of international social policy to address basic human needs that encourage

respect for the diversity of cultures and societies. By incorporating the voices of Ethiopian children, this multi-cultural research perspective is consistent with the NASW's Code of Ethics and can address the oft criticism that social work knowledge is still based on western values.

SECTION THREE: LITERATURE REVIEW

Bioecological theory serves as the theoretical framework for this research, focusing on how children use their psychosocial skills to navigate their environments and influence their developmental outcomes. It emphasizes person characteristics, including demand characteristics (observable features that invite reactions from the environment), resource characteristics (competence-impeding liabilities and competence-promoting assets), and force characteristics (individual differences in temperament, motivation, and persistence). The study aims to contextualize children's development within multiple nested systems, with the household exerting the most influence and being influenced by the wider community and socio-economic factors. Longitudinal data modeling is used to capture children's cumulative experiences from preteen to adulthood, and the research seeks to understand how psychosocial skills interact with parental depression, shaping children's developmental trajectories. By exploring these relationships, the study aims to gain insights into how various factors influence children's development over time.

Google Scholar, JSTOR, Tandfonline, PsycINFO, EBSCO, ERIC, and YULIS databases were conducted using keywords such as resilience, wellbeing, and risk/protective factors. These searches were aimed to explore relevant literature and studies related to these topics, allowing for a comprehensive investigation into the interplay between resilience, wellbeing, and the factors that contribute to individuals' ability to overcome challenges and thrive in various contexts. The diverse databases provided access to a wealth of valuable information, supporting and informing the researcher's study on these crucial aspects of human development and functioning.

3.1 The Etiology of Child Development

Despite making up one-third of the global population, children represent half of those living on less than $1.90 per day. approximately, around one billion children lack basic necessities

such as food, shelter, health care and education that they need to survive and thrive. A quarter of children now live in countries affected by conflict or disaster without proper care and protection (UNICEF, 2016). A third of these are out of school (UNICEF, 2018) with apparent psychosocial vulnerability and other consequences later in life. (Dovran et al., 2019; Misra et al., 2020; Pastore et al., 2022; Wang et al., 2018). Poverty prevents millions of children in developing countries from reaching their full developmental potential. Poverty-stricken children not only suffer from poor living standards and are twice as likely as their wealthier peers to die young, but they also develop fewer marketable skills for the labor force and earn lower wages as adults. (UNICEF, 2021)

Over the years, researchers have investigated the association between adverse childhood experience and adult health outcomes (Petruccelli et al., 2019) including obesity (Wiss & Brewerton, 2020) and persistent pain and disability (Bussières et al., 2020), reduced psychological resilience (Morgan et al., 2021) juvenile recidivism (Yohros, 2022), homelessness (Liu et al., 2021), parenting and child psychopathology (Rowell & Neal-Barnett, 2021) maladaptive schemas in adulthood (Pilkington et al., 2021), and the likes. In addition, "numerous studies have revealed the detrimental effects of ACEs on individuals' well-being, including poorer physical and behavioral health, juvenile offending, delinquency and substance use, reduced life opportunities, and shortened life expectancy"(Yoon et al., 2021, p. 2). One recent meta-analysis of 23 longitudinal cohort studies found a "strong association between childhood trauma involving "bullying (victimhood, perpetration and frequency); emotional abuse; physical neglect; parental loss; and general maltreatment (unspecified and/or multiple trauma exposure) … and deleterious mental health outcomes including, psychotic experiences, depression, bipolar disorder and psychosis" (McKay et al., 2021, p. 189)

To gain a comprehensive understanding of how early childhood adversity impacts later life outcomes, it is crucial to consider both positive and negative changes. Variations in outcomes between individuals and within individuals over time can be linked to their exposure to adversity during early childhood and the level of protection provided to promote normal developmental processes. It is essential to conceptualize development as a lifelong process, encompassing distinct transitions and trajectories. This approach involves assessing aspects of adversity and protective factors within the child's overall environment, including their family, community, and the broader macro context, and examining how these risk and protective factors interact over time to influence a child's outcomes. Despite the prevalence of adversity in the form of bioecological and environmental hazards such as poverty, abuse, neglect, violence, war, and natural disasters in the modern world, most individuals tend to adapt to new realities or strive to improve their situation. However, some risks, given their magnitude and intensity, may render individuals incapable of fulfilling their responsibilities effectively. A thorough investigation of these dynamics can shed light on the complexities of developmental processes and inform interventions aimed at fostering resilience and positive outcomes for children facing early adversity.

3.2. Risk and Protective Factors

Risk factors are probabilistic statements whose outcome predictive validity is dependent on a specific context, time, and dimensions. (Zolkoski & Bullock, 2012). Low birth weight, for example, caused by a lack of nutrition and medical care during pregnancy, could be the result of an inability to afford adequate care. The family may also be in the midst of ongoing violence or a natural disaster, making access to its resources difficult. As a result, risk assessment should isolate and analyze the most likely causes among a variety of factors. Second, being risk-averse one time does not guarantee a similar outcome when an identical risk arises next time. Thus, “some at-risk

children [who] excel at a point in time, may falter subsequently and manifest substantial deterioration in their levels of adaptation" (Luthar, Cicchetti, & Becker, 2000, p. 11) Thirdly, Children with similar early adverse histories of adversities can be linked to a variety of outcomes, ranging from psychopathology to resilience. For example, 53 men with borderline personality disorder (BPD) were compared with their respective female siblings who had similar childhood pathology, and the men reported to have more severe physical, emotional, and social problems than their female siblings during their adolescence. (Laporte et al., 2012)

Protective factors, on the other hand, have been defined as elements that mitigate the effects of individual or environmental vulnerabilities, resulting in a more positive adaptational trajectory than would have occurred otherwise.(A. Masten et al., 1990). These are generally composed of internal attribute to the individual and element found in the external environment. (Benjamin, 2010) lists salient protective factors for psychosocial resilience with respect to a child, the family, and the community. Some of the factors associated with maladaptation, individual personality demonstrated through temperament and emotional regulation, the quality of parent-child relationship, as well as prosocial environment, access to opportunities and services within the community (C. W. Anderson, 2016).

Besides reducing risk factors, enhancing protective factors is also considered another way of promoting resilience. According to the National Research Council and Institute of Medicine Committee on the Prevention of Mental Disorders and Substance Abuse Among Children, it is essential to understand the difficulty to distinguish risk factors from protective factors because of their reciprocal relationships in influencing recovery or outcomes albeit in opposite directions acting as the extreme ends of a continuous variable (Institute of Medicine et al., 2009) Finally, a lot of work remains to understand the mechanisms through which these protective factors work

across the sexes and ages, as well as development contexts. It is also cumbersome to specify and assign a protective factor that can work against a particular risk factor or identify a favorable combination of factors that can provide different levels of protection. The process by which certain factors can be risk factors and protective factors simultaneously remains to be debated (Eriksson, Cater, Andershed, & Andershed, 2010)

As previously stated, for resilience to occur, an individual must face serious adverse life circumstances that impair normal functioning, and the individual must exhibit positive outcomes despite the adversities. Accordingly, "resilience is inferred when risk or adversity is high enough to pose a significant threat to healthy development or functioning and yet positive outcomes are nonetheless observed"(J. R. Riley & Masten, 2005, p. 14). This is to distinguish between temporary setbacks that can be reversed with reasonable effort and life-altering crises that require significant resources to avert. Developmental risk factors encompass a wide array of individual, familial and socioecological factors which are discussed in the following pages.

3.2.1 Individual Level Risk/Protective Factors

3.2.1.1 Visible difference

The International Classification of Functioning, Disability and Health (ICF) conceptualizes disability as a multidimensional and interactive process that influences a child's developmental trajectories within the context of the individual's "physical or mental functional limitation and an "unaccommodating environment resulting in the inability to fully participate in society"(Loeb et al., 2018, p. 495). According the World Health Organization, disability is defined as "the outcome or result of a complex relationship between an individual's health condition and personal factors, and of the external factors that represent the circumstances in which the individual lives" (World

Health Organization, 2001, p. 17). From these conceptualizations impairment is considered a disability in the context of environmental unfavourability and the severity of the limitation that causes social-economic exclusions.

Persons with visible difference are those with broader range of appearance-altering conditions such as "congenital anomalies (e.g., cleft lip and palate, neurofibromatosis, birthmarks), acquired disfigurements from illnesses or genetic conditions (e.g., acne, vitiligo), injuries (e.g., burns, accidents), and surgical interventions (e.g., treatment for head and neck cancer) (Jewett et al., 2018a, p. 103). They experience several challenges ranging from psychological distress involving enduring states of depression, anxiety, as well as more transitory states of shame and embarrassment, negatively appraised "as more poorly behaved, more anxious, less happy, less confident as learners, more critical of their physical appearance and less popular than their peers … [and] "tend to have a more negative perception of themselves, emotional and behavioral difficulties" "(Swift et al., 2021a, p. 2; Meyer, 2021) with the consequent negative effect on developmental outcomes.

Empirically, a semi-structured interviews of 22 children with visible differences in the United Kingdom, demonstrated that the participants had a pervasive anxiety for being unattractive to the opposite sex "and feeling personally devalued" (Sharratt et al., 2018, p. 3) (Sharratt et al., 2018, p. 3) Altered appearance following treatment for head and neck cancer involving 21 patients in the UK contributed to psychosocial distress that negatively impacted their adaptation. (Vaidya et al., 2019) Overall, a systematic review of 11 studies revealed that adolescents with a visible difference exhibits symptoms of anxiety compared to peers (van Dalen et al., 2020)

Apart from being hard on themselves, persons with invisible difference face prejudice, stigmatization and discrimination that affect the quality of their lives as "negative attitudes toward

disability disempower individuals with disabilities and lead to their social exclusion and isolation. (Babik & Gardner, 2021a, p. 1). Since the value placed on outward appearance is becoming greater and more disproportionate to other aspects of self-esteem and self-worth (Rumsey, 2017, p. 2), "workers with visible disabilities encounter unique challenges compared to workers with other concealable identities"(Santuzzi et al., 2014, p. 203). They also face negative reactions from others who pass judgment on their appearance, leading to social anxiety in which they continue to experience exclusion or rejection. (Baumeister & Leary, 1995). In addition, individuals with physical disabilities are considered less competent because of the assumption that they have lower IQ that have become a leading barrier to employment. Viewed as outsiders, unable to establish friendships and romantic relationships, and the attitudes and treatment exhibited by others can have detrimental effects on their self-efficacy (Ysasi et al., 2018a). As evidence, a study assessing the attitudes 396 children (aged 4–10 years, 54% male, and 83% White) toward children with visible difference revealed that the participants had significantly low attitudes to form friendship with either over-weight children or with those that had facial burn compared to those with normal appearance (Parnell et al., 2021, p. 343). Related to this, an online observation of sets of facial pictures collected from craniofacial and dental surgery by 145 individuals garnered negative attitude towards individuals with facial disfigurement, "perceiving them as having less desirable personality traits (e.g., emotional stability, conscientiousness), internal attributes (e.g., happiness, intelligence), and social attributes (e.g., trustworthiness, popularity). (Jamrozik et al., 2019, p. 124)

Based on data collected during the 2011–2012 academic year, the U.S. Department of Education Office for Civil Rights concluded that "students with disabilities are more than twice as likely to receive an out-of-school suspension … [and] subject to physical and mechanical restraint and seclusion at rates that far exceed that of other students" (Rafa, 2018, p. 1) These practices

obviously create chances of increased dropout rate and the likelihood of ending up in the juvenile justice system. The American bar association argues that once a child is involved with the juvenile justice system, the psychological and economic consequences can have a long-term impact, while at the same time limiting their educational and financial opportunities and increasing their chances of reincarceration (Scialabba, Nicole, 2017)

Parents of chronically ill children, on the other hand, may face social exclusion and marginalization in public spaces if their children exhibit atypical behaviors such as outbursts and disruption of a predetermined social norms. According to the findings of a survey of 33 parents of children with an appearance-altering condition, negative reactions from others were evident, and the struggle to inform their children about the situation without distressing the latter resulted in difficult emotions (Feragen et al., 2022a), leading to elevated symptoms of anxiety and depression in comparison to parents of healthy children. An interview of 33 parents of children with an appearance-altering condition, findings suggest that negative reactions from others and the struggle to aware their children without distressing the child created difficult emotions. (Feragen et al., 2022a) leading to elevated symptoms of anxiety and depression than parents of healthy children (Cohn et al., 2020; Scherer et al., 2019).

3.2.1.2. Gender gap

The 2021 global gender gap Index measuring the systematic differences in in economic opportunities, educational attainment, heath and Political participation between males and females, revealed that at the current rate, gender inequalities in Western Europe, North America, and Latin America and the Caribbean may be bridged in 52.1 years, 61.5 years, and 68.9 years, respectively. It will, however, take more than a century to close the gender gap in all other regions: 121.7 years in Sub-Saharan Africa, 134.7 years in Eastern Europe and Central Asia, 165.1 years in East Asia

and the Pacific, 142.4 years in the Middle East and North Africa, and 195.4 years in South Asia. (World Economic Forum, 2021)

Compared to males, females generally encounter significant challenges throughout their lives. Socially constructed norms shape the roles and relationships of females and males, affecting their respective access to and utilization of resources, as well as the ability to realize their full rights and exercise their potentials. “The process of this social construction, however, is inadequately understood, as is also how particular forms of gender inequalities are maintained, and by what means they might change over time”(Agarwal, 1997, p. 1)

There are two ways social construction perpetuates gender inequality. First, girls are expected to be passive and sensitive rather than competitive, “learn to control their behavior and study quietly, preventing their gifts from shining thereby hindering their talents to come forward. (Määttä & Uusiautti, 2020) Thus “gender norms and stereotypes that perpetuate inequality are deeply embedded in social and individual consciousness” (Seguino, 2007, p. 1) In certain cultures, for instance, there are differences in the upbringings of girls and boys. From the get-go, girls are encouraged to stay close to home and adults like to interact with them than boys. Girls in turn, learn to pay attention to the hopes and pain of adults, and are taught sensible to respond to their expectations influencing the ways girl’s development in social and linguistic abilities is emphasized in upbringing.

Stereotypical attitudes of teachers towards pupils on educational outcomes have been well documented. (Copur-Gencturk et al., 2020; Makarova et al., 2019; Meinck & Brese, 2019; Timmermans et al., 2018) According to the findings of an Israeli study, teacher bias toward a specific gender has a positive effect on grades and enrollment in advanced math classes that in turn affect “occupational choices and earnings at adulthood”(Lavy & Sand, 2018, p. 1) Another

study in Italy revealed that Middle school girls taught by gender-biased teachers underperform in math, have lower self-confidence on math ability and upon the recommendation of the same teachers enroll into less demanding high schools thus failing to achieve their full potential.(Carlana, 2019, p. 1163) on the other hand, "teachers' higher expectations concerning the reading ability of girls explained the differences between boys' and girls' reading achievement"(Muntoni & Retelsdorf, 2018, p. 1)

Secondly, apart from restrictions imposed by the society's expectations, these characterizations, beliefs, and attitudes are often unconsciously internalized by females. The fact that "men tend to have higher self-esteem than women …[is one of] the most well-established findings in the self-esteem literature"(Bleidorn et al., n.d., p. 396) This is the case even in the developed world where, based on the perspectives of 300,000 15-year-old students from 64 countries, a study found that the stereotype attitude that "math to men" or "math is not for girls" is stronger resulting in the underrepresentation of girls in math fields (Breda et al., 2020)

Early marriage results in several pregnancies and births exposing young girls to the risk of prolonged labor leading to obstetric fistula, maternal and infant mortality. Age difference between the couple robes the girl's agency in decision-making regarding sexual and reproductive matters leading young married girls to be preoccupied with childcare and other household management tasks they are ill-prepared to handle that culminates in in divorce at an early age forcing women and their off springs into abject poverty. Apart from these reproductive health and psychosocial problems, early marriage impedes girls' educational participation, and their ability to fulfill an active economic and socio-political role and to develop their sense of worth. (Emirie, 2005) Early marriage does not end up affecting only the young adult. Because they express less realistic child-rearing expectations, young mother is less responsive to their infant development compared to

older mothers. The older the mothers are the more they develop affectionate stimulating and sensitive relationship with their younger infants (Bornstein et al., 2012)

Apart from income differential and urban-rural divide, a study conducted in Andhra Pradesh and Telangana regions of India found that boys had an advantage in intra-household food allocation during childhood and adolescence, with girls consuming less nutritious foods, resulting in differences in developmental outcomes such as puberty onset, school enrollment, time use, and dietary behaviors among adolescents. (Aurino, 2017)

3.2.1.3. Food & Nutrition

Children are exposed to nutrient deficiencies as a result of eating monotonous, high-energy foods with little variety in their diets.(Kupka et al., 2020) The quality of nutrition intake has an impact on their survival, growth, and development. Especially, low-income families consume mostly starchy foods that don't provide adequate essential vitamins and minerals. Malnutrition caused by unbalanced intake of essential nutrients continues to be a global problem. In 2017, overnutrition and undernutrition affect 340 million children and adolescents aged 5 to 19 worldwide. (World Health Organization, 2021). Micronutrient deficiency-related mortality remains significant, contributing to the illnesses, inadequate development, and losses in economic productivity. (Bai et al., 2022; Nicholaus et al., 2020) Obesity and overweight are the leading causes of noncommunicable diseases, which account for nearly two-thirds (63%) of adult deaths worldwide. Similarly, underweight (thinness) affects 8.4 percent of girls and 12.4 percent of boys Micronutrient deficiency also adds significantly to global health hazards iron insufficiency is the most common micronutrient deficiency among teenagers worldwide (Bai et al., 2022)

The capacity to obtain nutrient-dense diets may be hampered by income and food prices. Moreover, parental nutrition literacy and attitudes have an impact on the diet quality and micronutrient intake of their children. As any sphere of children's development, it's important to recognize the influence of parental behavior on children's eating practices. In a sample of Spanish preschoolers, a study suggested a link between parental healthy-eating attitudes, where their children consume less read meat and sugar-sweetened beverage, had higher intakes of protein and vitamin-rich foods, and lower body mass index (BMI). (Meng et al., 2018)

The capacity to obtain nutrient-dense diets may be hampered by income and food prices. Socio-economic factors affect food insecurity, nutritional statuses, and dietary diversity. A study in Bangladesh found a positive association between household income and food security, dietary diversity measured using Dietary Diversity Score (DDS) as a proxy nutrient adequacy, and nutrient-intake. (Ali et al., 2019) Another study Ghana showed similar results where farming households experienced more food insecurity compared to their non-farming counterparts, and the later had significantly higher dietary diversity scores than farming households. Food insecurity was associated with lower household dietary diversity and lower child mean micronutrient adequacy(Christian et al., 2019) Using dietary diversity score to assess household nutrient adequacy, researchers in Ethiopia found urban-rural divide in nutrient intake where households in urban areas and those with higher income have adequate nutrient intake in essential food groups such calcium, zinc, and vitamins intake compared with rural dwellers and poor families. (Mekonnen et al., 2020)

3.2.2. Household Level

3.2.2.1. Caregivers' Socioeconomic Status (SES)

Robust economic resources are thus one of the best-established contributors to human development and well-being.(Peverill et al., 2021; Poulain et al., 2020) Specifically, caregivers' socioeconomic status (SES) has a significant impact on the development of young children. It "provides opportunities for improved nutrition and sanitation and greater access to clean water, education, medicine, and health services"(Kaiser et al., 2017, p. 2) SES influences academic achievement and cognitive development through a series of family environment variables such as parents' educational expectations, parenting ideas and behaviors, and the parent–child relationship (Chen et al., 2018, p. 3) A meta-analysis of 120 studies involving 26,715 participants aged 3 to 19 years examined the relationship between family SES and child psychopathology and discovered that children from lower-income families were more likely to experience both externalizing and internalizing psychopathology and perform poorly than children from higher-income families.(Hosokawa & Katsura, 2018)

However, compared to parents with higher incomes, low-income parents are less likely to believe that early investment in childhood, such as taking turns and communicating directly, will pay off in the long run.(List et al., 2021). Moreover, "not all forms of parental involvement are positively related to academic achievement"(Boonk et al., 2018, p. 10). Rather, parents who have high educational expectations/aspirations and those who engage, encourage and support their children show promises correlations with academic achievement.

The choice between using asset-based wealth indictors or income and consumption figures to measure SES remains controversial, however. For one, obtaining reliable and timely useful data

to accurately measure consumption data is difficult. Income data is not only highly variable, but also time consuming and costly to collect. The appropriateness of Wealth Index, that uses household items, such as housing materials, access to toilet, ownership of certain gadgets, or land and livestock. (Poirier et al., 2020) to measure the socioeconomic status of a household, is also questionable. For instance, access to water or electricity, which is a key component of the wealth index, is a community rather than a household-level variable. Secondly, the ownership of some specific items may be due to preference rather than financial constraints, and it does not always reflect living standards of a household.(Trinh et al., 2021) In general, "these wealth indices, do not consistently track well against expenditure-based measures of poverty and should not be used to identify individuals or households living below consumption- or expenditures-based poverty thresholds"(Foreit KGF, Schreiner M, 2011, p. 1)

3.2.2.2. Parent-Child Relationship

Parents are the most important socializing agents and role models to impart knowledge and reward desired behavior (Letkiewicz et al., 2019; UNESCO, 2007) Moreover, consistent discipline and warm approache towards a child is positively related to " self-esteem, internalized control, prosocial orientation and intellectual achievement (Jay Belsky, 1984, p. 85) Parenting problems manifested by low quality of parent–child relation, growing in non-nuclear family such as having a stepfather and living with family that are socially isolated) (Assink et al., 2019, p. 4) An Australian study which examined the links between young children's emotional wellbeing and the quality of parental relationship found that children living with both parents had better emotional wellbeing than children living with one parent. On the other hand, Children growing up in a non-cohabiting parent's household, particularly children growing up without their father, have a low identification with a male role model. (Berger & McLanahan, 2015) The influence nurturing

fathers living with their children not only promote a close and enduring relationship with their children but also children who grow up with involved fathers are more likely to have healthy self-esteem (Risnawati et al., 2021), lower levels of internalizing and externalizing behavior problems (Yoon et al., 2018), lower rate of involvement in risky behaviors (Cryer-Coupet et al., 2020) better school attendance, academic achievements and aspirations (Otani, 2019). Other studies have also revealed that "absence of the father is associated with lower self-esteem among children and adolescents"(Krauss et al., 2020, p. 6).

Although parents are often considered agents who shape children's positive functioning or maladjustment, children can also influence the well-being of their parents either by responding positively to their love and affection, or negatively through hostility and rage undreaming parental functioning leading to unresponsive parenting. Such bidirectional association and reciprocal transaction between children's own characteristics influencing the behavior and well-being of their social environment have been the subject inquire for a while (Davidov et al., 2015). Child behaviors that are disruptive, aversive, or inhibitive influence mothers' perceptions of their children as vulnerable, which leads to an intrusive and overprotective parental reaction. (Yan & Ansari, 2016). Likewise, parents of disabled children (regardless of the category of the disability) frequently report higher levels of stress than parents of non-disabled children. A study investigating the relationship between parental stress and autistic children found that parenting stress was positively correlated with the children's ASD symptoms and behavioral problems.(Miranda et al., 2019; Vernhet et al., 2019). (Behrendt et al., 2020) have documented the relationship between maternal anxiety and child temperament dimensions (surgency, negative affectivity, and regulation/effortful control).

The link between caregivers' depression and child outcomes has been well-established. Parental depression has negative associations with children's emotional and behavioral functioning including children's self-esteem. Maternal depression was linked to creation of subsequent children internalizing issues and predicted future hostile parenting.(Hentges et al., 2021) Depressed mothers offered disruptive hostile reacting home environment to children which undermines proper child functioning (Krauss et al., 2020) Based on data drawn from 3,119 children, a study documented reciprocal relations between maternal depression and child behavior problems across early childhood (Baker et al., 2020) Another study which used data from a community sample of 4589 low-income women and their preschool-age children in Los Angeles County found that maternal depressive symptoms are associated several child health outcomes including poor diet, health insurance coverage, and use of public medical services. (Thompson et al., 2018) Likewise, a meta-analysis of 52 studies showed that paternal depressive symptoms are positively associated with symptoms of externalizing behaviors including oppositional–defiant behavior, conduct problems, and overall externalizing behavior(Cheung & Theule, 2019)

3.2.3. Community Level Risk/Protective Factors

3.2.3.1 Neighborhood Disadvantage and Children's Outcomes

Neighborhoods are important settings that either provide opportunities for children to grow or are sources of risks that impede their development. Impoverished neighborhoods ridden with crime influence several interconnected aspects of child development, increased exposure to problem behavior and negative norms through interactions with the wrong crowed. Likewise, the presence of child-friendly institutional resources such as schools, healthcare, public libraries,

recreational programs and activities all have an impact on children's outcomes.(S. Anderson et al., 2019).

The immediate neighborhood context shapes children's and adolescents' expectations about available employment opportunities, influence how children and adolescents experience the transition to adulthood and their respective outcomes such as schooling, adolescent sexual activity and fertility, criminal activity, and substance use. Moreover, after controlling individual and family characteristics, a study revealed that neighborhood characteristics have positive relationship with reported grades in math and reading, school completion, graduation, and college attendance rates. (Leventhal & Brooks-Gunn, 2000). Neighborhood safety concern predicts internalizing problems (depressive and withdrawn) and externalizing behaviors (acting out and aggressiveness) (Vazsonyi et al., 2020), and ” there are generally robust linkages between adverse neighborhood factors and conduct disorder and externalizing behavior problems”(Jennings et al., 2018, p. 317) According to a study, children's temperament develops over time in response to the neighborhood in which they are raised and " "children with lower neighborhood or family SES tended to be less sociable, more reactive, and less persistent."” (Strickhouser & Sutin, 2020) Nevertheless, “neighborhoods with better opportunities may protect against the negative consequences of low family SES on children’s stress physiology and physical health”(Roubinov et al., 2018)

3.2.3.2 Social Support

Social capital is complex and multidimensional interrelations consisting of five dimensions of cognitive, structural, bonding, bridging, and linking components. (Derose & Varda, 2009). While cognitive social capital refers to the perception of trust, reciprocity, norms, and values within a community, structural social capital is concerned with the quantity of relationships and

membership in institutions that can bring individuals and groups together. Bonding refers to social resources that an individual can get through close networks, whereas bridging is concerned with resources that can be accessed from networks or groups with different characteristics. (Ehsan et al., 2019). Social capital is also recognized as strong relationships, high levels of trust, and a sense of shard vision and purpose among the participants with three dimensions "structural (connections between actors), relational (trust between actors), and cognitive (shared objectives and ideals among actors)" (Claridge, 2018). It can be "can be analyzed as an individual attribute (e.g., as an individual's access to social support within a network) or as a collective property (e.g., norms of mutual assistance within a group)" (Lee et al., 2022, p. 1)

Emotional, material, or informational resources one gets from his/her social environment can mitigate the effects of negative psychosocial outcomes like depression, anxiety, low self-efficacy, stress, and social isolation and promote wellbeing. (Dambi et al., 2018) In addition to mitigating these adversities, supportive relationships can promote wellbeing by creating conducive environment for people to take full advantage of their potential for personal growth and development (Feeney & Collins, 2015). Following (Thoits, 1995), social support is conceptualized as direct or indirect and perceived or received social resources available to children within the context of their respective communities to improve the well-being of children. Perceived social support denotes the feeling that support is available, while received social support refers to the amount of assistance provided. Social support can be instrumental such as provision of material assistance. Informational support refers to providing information, advice, and guidance to solve personal problems. "Emotional support involves the expression of sympathy, caring, esteem, value, or encouragement" (Feeney & Collins, 2015, p. 3).

Direct social support includes the availability of someone who can help a child with his/her studies, transportation to school or a job, offer emotional support when the child faces problems at home or at school such as being bullied by another child, provide religious guidance and financial support. Helping the parents/caregivers. Children can also indirectly benefit from assistance given to their parents/caregivers from groups such as community association/co-ops, women's groups, religious groups, credit/funeral groups etc.) or from different individuals composed of family members, neighbors, friends etc. (Lee et al., 2022).

Empirical studies suggest supportive social contexts expose young people to a variety of important resources, which have the potential to reduce the likelihood of poor psychosocial outcomes. A meta-analysis analyzing data from 196,247 youth aged 12–19 years showed that social support was significantly associated with internalizing behavior, substance use, perpetration of bullying and victimization signifying its importance in reducing the likelihood of poor psychosocial outcomes among adolescents. (Heerde & Hemphill, 2018)

3.2.4. Macro Level Risk/ Protective Factors

3.2.4.1. Climate shocks

A growing body of literature have revealed the effects of early life climatic and economic shocks on long-term children's outcome. In a study examining the effect of El Nino on children, it was found that climate shocks, such as excessive precipitation, alter income, consumption, nutrition, and diet composition, which in turn affect children's development in terms of physical height and weight, and their cognitive or language and memory development (Aguilar & Vicarelli, 2022) A review of 90 studies indicated that climate shocks involving excessive rainfall, extreme temperatures, and drought were identified as major risk factors and consistent predictors for child

malnutrition manifested by wasting, stunting, and underweight. Another study found that a drought increases the risk of early marriage by 3% for children aged 12 to 17, and it is associated with a 4% increase in the likelihood of having a child before the age of 18 (Corno et al., 2020)

3.2.4.2. Economic Shocks

Economic crises have an impact on child health globally and across subgroups of countries with varying income levels. A study that used data from the World Bank and the World Health Organization for 127 countries between 1995 and 2014 found that changes in macroeconomic indicators like per capita GDP, unemployment, and inflation rates are associated with higher child mortality rates (Tejada et al., 2019). Empirical evidence suggests that aggregate economic shocks have an impact on child education and health. These outcomes are especially procyclical in poorer countries, where economic downturns increase infant mortality while decreasing school enrollment and nutrition (Ferreira & Schady, 2009). Macroeconomic volatility is very common in developing countries. Severe negative economic shocks can exacerbate poverty and food insecurity, reducing child dietary diversity and increasing the risks of diarrhea, fever, and stunting. A study exploring the effect of macroeconomics shocks found that a mere 10% decrease in national income increases wasting by up to 22%. The implication is that Children are more vulnerable to wasting and wasting-related morbidity and mortality as a result of economic contractions.(Headey & Ruel, 2020)

3.3. Resilience

For nearly a half-century, scientists have been studying the issue of high-risk children developing psychopathology and the resulting maladaptive outcomes. Similarly, research into the adaptive mechanisms of children who faced setbacks but progressed well under risky conditions

has equally gained attention (Zolkoski & Bullock, 2012). Rather than focusing on an individual's predicaments, researchers have focused on how children, by interacting with their environment create positive developmental pathways (Wright, Masten, & Narayan, 2013, p. 15). Subsequently, researchers are able to design policies and programs necessary that foster positive developmental trajectories. Broadening its scope, current research interest encompasses how genetic factors interact with the environment to influence the pace and direction of human adaptation when faced with adverse situations (Wright, Masten, & Narayan, 2013). Earlier assumptions that genetics protects individuals from developing adversities due to their "hardiness," which facilitates adaptation to environmental hazards, have given way to acknowledge the importance of the gene-environment interaction in influencing human behavior. From a gene-environment (GxE) standpoint, genetic effects on functioning outcomes may be observed only in specific environmental contexts or in conjunction with histories of an experience (Cicchet, 2010, p. 150).

The gene that transports the neurotransmitter serotonin from synapses to presynaptic neurons, serotonin transporter protein (5-HTT), has been extensively studied because it is thought to be one of the major factors contributing to the etiology of many psychiatric disorders. Patients with a short form of the 5-HTT gene were found to be more likely to experience depression after adversity than those with a long 5-HTT gene (Caspi, et al., 2003) (Cicchet, 2010). Other research findings confirmed that a serotonin transporter promoter polymorphism (5-HTTLPR) modifies the relationship between stress and depression, with the less functional s allele associated with increased stress sensitivity. (Karg et al., 2011; Miller et al., 2013). Another meta-analysis, however, didn’t find significant association between the serotonin transporter gene and depression (Neil Risch, et al., 2009). Despite these contradictory findings, a recent meta-analysis of 22 studies found that those with the s-allele are more capable of recovering from depression over time,

expanding the current view of the interplay between 5-HTTLPR and stress , resulting in a three-way interaction: gene x environment x time (Delli Colli et al., 2022). Meanwhile, the science in this respect is still experimental and the ethics of providing support based on genetics is questionable.

So far, researchers are not able to come up with a specific and universal definition of resilience. It "is many things, including: a descriptive and normative concept; a way of thinking; an approach to research on social, ecological, and social–ecological systems; a framework; and a boundary object" (2013 Resilience has also been defined as a trait, a set of characteristics, an outcome, a trajectory, or a process that mediates stress and trauma responses (Tsai et al., 2018). (Downes et al., 2013) have documented several definitions of resilience advanced by scientists from various disciplines including natural resources and environmental management, financial and urban planning, psychology, and human development.

Early scholars referred children who cope, adapt, and continue with life despite challenging situations, as invulnerable super-kids that have inner fortitude or character armor (Walsh, 2015). Childhood adversities were considered to inevitably lead to serious life challenges later in life. This deterministic approach based on genetic and biological predispositions assumed "inadequate caregiving, and traumatic occurrences within the home – such as child maltreatment and domestic violence, exposure to community violence, chronic illness, and catastrophic life events (Cicchetti, 2010, p. 146), – will eventually lead in disordered outcomes. However, when all high-risk children did not develop psychopathology and its consequent maladaptive outcomes, the subject of scientific inquiry shifted from individual pathology to person-in-environment interactions. Instead of describing the children as incredible, invincible, and endowed with extraordinary mental abilities, (Winders, 2014, p. 3) the concept of resilience as positive adaptation to significant

challenges and a basic human adaptive system emerged (Winders, 2014, pp. 3-4). As a result, resilience was viewed as a process that resulted in a quick recovery from shock, illness, or hardship. One who is resilient may be described as irrepressible, buoyant, enduring, and flexible; the person who bounces back from stress and shocks unchanged. This approach, however, is criticized for being reactive when proactive measures are required in the face of adversity, as well as for its tendency to adopt a paternalistic mode, which can lead to activities being skewed toward supply rather than demand (Manyena, 2006).

In behavioral sciences, the American Psychological Association uses the term resilience to describe "the process of adapting well in the face of adversity, trauma, tragedy, threats, or even significant sources of stress" (American Psychological Association, 2012). Lee, Cheung, & Kwong, (2012), define resilience beyond a process of recovering and a functioning normally, to also include the capacity to harness resources that enables one to navigate out of adversity and thereby register better outcomes. It is not a trait that people have or do not have; rather, it is a set of behaviors, thoughts, and actions that can be learned and developed in anyone. "Any scientific representation of resilience as a personal attribute can inadvertently pave the way for perceptions that some individuals simply do not have "what it takes" to overcome adversity"(Luthar & Cicchetti, 2000). A broader definition ostensibly thought to serve across systems - ranging from microorganisms, individuals, families, communities to the entire ecosystem have been espoused by Masten. Resilience, according to this view, refers to "the capacity of a dynamic system to adapt successfully to disturbances that threaten system function, viability, or development" (A. S. Masten, 2019, p. 101). As an example, Dr. Masten referred Cambodian refugees she had worked with as "remarkably resilient" because notwithstanding their continued struggle with occasional flashbacks of their traumatic experiences, they went on with their lives (Southwick et al., 2014).

Another approach is to explain resilience in the context of people's reaction to adversities. While Individuals who are unable to function normally for a long time after an adverse event are referred to as chronically dysfunctional, those who return to baseline after adversity are called survivors. On the other hand, those who manage to continue functioning normally soon after the event occurred show evidence of resilience. In this context, resilience is defined as a stable trajectory of healthy functioning following a highly adverse event which is characterized by a brief deviation from an otherwise normal development path during which the individual reintegrates self in a conscious effort to move forward taking lessons from adverse experiences lives (Southwick et al., 2014). Thus "resilience is inferred when risk or adversity is high enough to pose a significant threat to healthy development or functioning and yet positive outcomes are nonetheless observed" (J. R. Riley & Masten, 2005, p. 14). Other than these biological and developmental perspectives, social and cultural perspective on resilience views resilience as "a sense of hope that life does indeed make sense, despite chaos, brutality, stress, worry, or despair (Southwick et al., 2014, p. 6). In general, resilience is perceived as capacity, a process and an outcome. In this connection, resilience the ability to positively adapt to changes caused by adverse conditions, a reintegration process and return to normal functioning with the assistance of protective factors following exposure to a severe stressor, and the positive and beneficial outcomes that result from successfully navigating stressful events (Lee et al., 2012).

Resilience is multidimensional, dynamic and domain specific. Certain individuals may function well in a couple of life domains but may face significant difficulties in other aspects (Friedman et al., 2007). For instance, an individual who adapts well in school might not be competent in social life. It is also fluid and dynamic in that specific circumstances dictate the scope of responses to adversities. Large scale, sudden traumatic events that come without warning and

causing considerable damage would undoubtedly require a robust response. “An individual's proximity to the event, duration of the incident, and the amount of exposure to the actual event” (Hanbury & Indart, 2013, p. 219) may affect the way one responds to an adverse situation. Moreover, these response can be shaped by environmental as well as intrapersonal factors where “the survival of an individual depends on the coping skill of other survivors, and on the ability of the families, organizations and communities to prepare for and respond to adversities” (Friedman et al., 2007, p. 290). In this connection, those within a particular system share the essence of cooperative adaptation such that resilience is viewed as, “a universal capacity which allows a person, group, or community to prevent, minimize or overcome the damaging effects of adversity”(Grotberg, 1995, p. 2). Finally, “resilience is a complex construct, and it may be defined differently in the context of individuals, families, organizations societies and cultures” (Southwick et al., 2014, p. 1). If a child is born in poverty, crime, and violence, however, ‘bouncing back to base line’ cannot be the proper definition.

3.3.1 Measuring Resilience

There are several instruments to measure resilience developed over the years. After reviewing fifteen resilience scales, (Windle, Bennett, & Noyes, 2011) found out the Connor-Davidson Resilience Scale, the Resilience Scale for Adults and the Brief Resilience Scale provided the best psychometric ratings. Another widely used measure, particularly in the field of education, is that proposed by Robert Havighurst, which "evaluates resilience based on age-specific competences encompassing the major psychological expectations for children in a given culture and across the life span from infancy to older age (J. Riley & Masten, 2006).

Nowadays, the emphasis on traditional economic proxies such as GDP has given way to the conceptualization of wellbeing as a multidimensional construct. As a sustainable condition

that allows for individuals to thrive, wellbeing has been defined as the experience of positive emotions including happiness and contentment, as well as the ability to function well in developing one's potential, having sense of purpose, positive relationships, and in general having control over one's life (Ruggeri et al., 2020) Since the adoption and ratification of United Nation's Convention on the Right of the Child in 1989 which recognized children as human beings with universal rights, the child indicators movement has been successful in ensuring that children's voices are heard and that they serve as key informants in studies about their quality of life and living conditions

Since then, UNICEF has launched the Multidimensional Child Poverty (MDCP) measure in 2012 to assess deprivations in terms of environmental pollution, lack of cultural activities, violence at school, lack of voice, and child labor exploitations. The Multiple Overlapping Deprivation Analysis (MODA) that uses children as analytical unit, was developed to measure the type and number of deprivations each child experiences. In 2018, the World Bank introduced the global Multidimensional Poverty Index (MPI), which takes three factors into account: standard of living, health, and education. Nutrition and infant mortality are regarded as health indicators, whereas school attendance and the number of years spent in school are considered educational indicators. The six indicators that make up the standard of living dimension are: access to food, clean water, sanitation, electricity, housing, and other assets. “The MPI begins by establishing a deprivation profile for each person, which shows which of the ten indicators they are deprived in. Each person is identified as deprived or non-deprived in each indicator based on a deprivation cutoff” (Alkire et al., 2018, p. 8)

. However, none of the scales were ‘gold standard' measure with sufficient conceptual and theoretical adequacy. Moreover, “a conceptually sound and psychometrically robust measure of resilience for children aged under 12 is lacking. Thus far, researchers dealing with children relied

on parents and teachers to rate the behavior of children in line with their respective stages of development. Such adaptive functioning indicators of resilience consisted of "different aspects of interpersonal behavior important for peer relations, indicators of psychopathology and an index of risk for school difficulties" (Windle, Bennett, & Noyes, 2011, p. 16).

3.4. Developmental Outcomes

3.4.1. Wellbeing

> "The primary mission of the social work profession is to enhance human well-being and help meet the basic human needs of all people… A historic and defining feature of social work is the profession's dual focus on individual well-being in a social context and the well-being of society" (National Association of Social Workers, 2017, p. 1)

The concept of wellbeing is central to the social work profession, aiming to enhance human welfare and meet basic human needs. While wellbeing has historical roots in ancient Greek philosophy with contrasting views of Hedonism's pursuit of pleasure and Eudemonia's emphasis on virtuous living, contemporary understanding remains diverse across disciplines. Researchers' attempts to define and measure wellbeing have been complex due to its multifaceted nature. In social work, wellbeing is interconnected with social and economic justice, eliminating poverty, and respecting diversity. Defining and measuring wellbeing remains essential for social work practice, necessitating a unified understanding of the concept to effectively support individuals and communities in need.

The Code of Ethics of the National Association of Social Workers is dotted with the concepts of wellbeing and human needs. Notwithstanding their central position in the mission of

NASW, these terms are not explicitly defined in any of the standards governing the profession. The Association cannot entirely be faulted for failing to define the terms, however. Despite having been studied since the ancient Greeks, it has eluded researchers' attempts to define and measure wellbeing due to its complex and multifaceted construct (Brey, 2012; Pollard & Lee, 2003). Some have even suggested that wellbeing is an intangible concept that is difficult to define and even more difficult to measure (Thomas, 2009). Nonetheless, several scholars have tried to define, measure, and expand our understanding of the very essence of wellbeing in diverse historical and cultural contexts, over several centuries of human existence. Especially, since the 1960s two overlapping but distinct research communities and traditions have emerged; one with a fairly narrow focus on health-related issues and the other with a quite broad focus about quality of life (Michalos & Nolte, 2014).

Contemporary research in wellbeing is conducted by diverse disciplines ranging from medicine, mental health, economics, social work, to urban and environmental planning, which led to the lack of common understanding and unified definition among the various disciplines. For instance, psychologists approach wellbeing in terms of the individual's meaning and sense of self, while, "in the clinical literature, wellbeing is most often used in an uncontested way to mean physical health"(de Chavez et al., 2005, p. 74). This absence of inter-discipline consensus in defining wellbeing can be ascribed to the differences on the underlying epistemological and theoretical foundations that the various perspectives are based on.

The origin of contemporary perspective on wellbeing can be traced back to ancient Greeks. Ancient Greek ethical philosophy "persisted as the dominant approach to Western moral philosophy until at least the Enlightenment, suffered a momentary eclipse during the nineteenth century, but re-emerged in Anglo-American philosophy in the late 1950s" (Baronett, 2016, p. 457).

Debates within the ancient Greek ethical philosophy to address such fundamental questions as what ultimately matters in life, which things are worth to live for and how to achieve the good life, can be understood in terms of two major philosophical thoughts of the time - *Hedonism* and *Eudemonia*. The "hedonic approach looks at well-being in terms of enhanced pleasure and or avoiding pain; while the eudemonic approach, "focuses on meaning and self-realization, and defines well-being in terms of the degree to which a person is fully functioning (Ryan & Deci, 2001, p. 141). In other words, while hedonism views wellbeing as the attainment of the most pleasure or happiness, eudemonism takes it further than just happiness, to the fulfilment and actualization of the true human nature and potential. These two traditions not only have distinct views about what constitutes the good life, the nature of their respective inquiries and approaches to developmental and social processes relating to well-being are divergent, albeit with a few intersections here and there, leading to the lack of a unified standard reference to the study of wellbeing applicable to all relevant fields. (Ryan & Deci, 2001).

3.4.1 *Eudemonia*

The word *eudemonia* is derived from two Greek words *eu (*well, good), and *daimon (*sprit), the combination of which is "often literally translated as happiness, flourishing and wellbeing" (Tiberius & Mason, 2009). Eudemonia, according to Aristotle, is the highest good for humans that has an intrinsic, complete by itself, and final superordinate value sought for its own sake, leaving nothing else for a person to desire (Segvic, 2008; Shields, 2015). This definition of happiness and fulfillment extends beyond the common perception of simple enjoyment of pleasurable situations and gratification, which can be obtained through immorality and perversity, whereas *eudemonia* is the result of virtue and morality (Smith, 2015, p. 203).

Eudemonia is attained by living a virtuous life of excellence, given one's potential. Aristotle distinguishes two types of virtues: moral virtue, which deals with desires and social behavior, and intellectual virtue, which deals with thought and knowledge. This deliberate quest for deeper understanding should be pursued throughout life to maintain the foundation for ethical reflection of reasons and the ultimate good life (Kraut, 2018). In a nutshell, “a person who cultivates such behaviors and habits is able to bear his misfortunes with balance and perspective, and thus can never be said to be truly unhappy” (Burton, 2013). Another argument advanced to support lifetime virtuous activity according to Aristotle is, “one swallow doesn’t make a summer, neither does one day or a short time make someone blessed and happy” (Wolbert et al., 2021, p. 700). This implies *eudemonia* is a dynamic concept which is not something that one can enjoy within the spur of the moment. Instead, it encompasses the totality of one's life; the ultimate value of life lived up to this very moment measuring how well one has lived up to her/his full potential (Pursuit of Happiness, 2016)

Humans are complex by nature, with diverse sets of desires, but they also share common needs that must be met. In this regard, access to goods should be based not only on individual needs, but also on the recognition that excessive use of goods by an individual may result in the deprivation of another. Thus, rather than being determined by individual needs and temperaments, happiness should be sought in a way that is appropriate for all of humanity. This concern for all humanity is especially important in today's consumerist society, in which most people are preoccupied with acquiring consumer goods and the good life is equated with home ownership and other material possessions (Glickman, 2017).

Moreover, eudemonia is associated with intellectual virtues and higher-order activities, Aristotle appears to reserve such a life for the very few learned polity and rare individuals such as

himself. He clearly believes that his own life and the lives of his friends are the best that a human being can have. (Kraut, 2018). Moreover, Aristotelian ethics assumes that individuals live in relatively healthy environment conducive for contemplation and reasoning. In practice, however, there are individuals who are profoundly ignorant of what they believe and what motivates them, and the deliberative process only helps those who are already educated and well off, thus excluding the rest. (Bruce Hauptli, 2013)

Another criticism of Aristotle is his views on children, women, and slaves. Children cannot be called happy, because their characters have not yet matured, and their lives are still too far from completion. Men of any age can still suffer great misfortune, and the most prosperous, may fall into great misfortunes in old age. Women cannot be happy to the same degree or in the same manner as men. The highest good for the slaves lies in their contribution to the happiness their masters to lead the political and speculative life open to those of the auspicious birth (Kahneman et al., 1999) In this connection, "Aristotelian dialectic may be powerless to help where help is most urgently needed, powerless to criticize where the need for philosophical critique is greatest. A philosophy that stops here is not only impotent but also callous: a tool of exploitation, an accomplice of misery"(Bruce Hauptli, 2013)

To summarize, Eudemonia is not a psychological state of mind or something that an individual experiences at a given moment. Instead, it is an objective activity and evaluation of one's life lived over a long period of time. While most virtuous activities require the acquisition of additional goods—generosity necessitates the acquisition of money, and temperance necessitates the acquisition of opportunities—eudemonia is a self-sufficient activity that is an end in itself, in which one ponders the general truth as to what is best for the universe rather than oneself, resulting in lasting pleasure dedicated to reason and knowledge (Lacewing, 2015).

3.4.1.2 Hedonism

Hedonism is a term derived from the Greek words *hêdonê* (“pleasure”), or Hedy’s (sweet” or pleasant) (Britannica, T. Editors of Encyclopaedia, 2018). It was first coined by Epicurus, one of the ancient Greek philosophers who lived in the third century B.C. (Bergsma et al., 2008) Despite the fact that the term "epicure" is sometimes used to describe a gourmet or a "fastidious voluptuary," Epicurus'.... philosophical precepts were frugality and simplicity. (Charles T. McGruder, n.d.) and the need to defer gratification or endure pain.

Epicurus espoused the view that, by nature human beings seek pleasure over pain, and regarded the pleasant life as an intrinsically worthwhile good without “pain in the body and trouble in the soul”(Surtz, 1949, p. 97). As the main criterion for all actions and the starting point and goal of life, the pleasant life (Bergsma et al., 2008, p. 400), involves “health, self-control, independence, moderation, simplicity, cheerfulness, friendship, prudence, intellectual and aesthetic values, and peace of mind” (Bergsma et al., 2008, p. 400). Epicurus associates the pleasant life with tranquility, calm and harmonious life achieved through limiting one’s desires. “No pleasure is a bad in itself: but the means which produces some pleasures bring with them disturbances many times greeter than the pleasures” (ANNAS, 1987, p. 17) Epicurus recognizes the need of moderating our desires because when they are satisfied, they enhance pleasure while when unfulfilled, they bring suffering. He suggests that when given the option, choose to minimize suffering rather than maximize pleasure.

Epicurus divides human desires into three. The first one is natural desires which are limited in supply but relatively easy to satisfy. These include bare necessities such food, water, and shelter without which one would suffer. Secondly, fame, power, money etc. are considered limitless and vain desires that should be eliminated to achieve pleasure. There are also natural, but not-necessary

indulgences such as eating out, which have no limit and are difficult to satisfy. Although such desires provide pleasure, they raise expectations to get more and more inflicting pain when not satisfied. (Konstan, 2022)

Most of human ailments, according to Epicurus, are caused by fear of dying and the gods. He suggests for people to overcome these worries in order to lead a happy life. (Starkstein, 2018, p. 26) According to his teachings, death is natural to humans as is pleasure. We should rather pursue pleasure to the fullest while we are still alive instead of worrying about the non-existent eternal life. To support this argument, Epicurus taught that death "means nothing to us, because that which has been broken down into atoms has no sensation, and that which has no sensation is no concern of ours.(Amicus, 2011, p. 12) In other words, as one is not concerned about conditions before birth, there is no need to worry about life after death because upon death we lose our faculty of feelings, consciousness and experience life by using the senses. Secondly, when one dies the person loses the feelings, consciousness, and the senses that are responsible for how he/she understands about being alive in the first place.

According to Epicurus, the fear of divine punishment is one of the other self-imposed beliefs that contributes to a painful and unhappy life. He claims that because they are perfect and immortal, the gods do not directly interfere with human affairs by punishing or rewarding people for their activities either during life or after death. "There's no one we have to please. There are no commandments we have to follow. We can choose simply to enjoy ourselves, rather than finding reasons to be miserable. We can make the radical choice of happiness" (Ev`ans, 2013, p. 81) Instead, human beings should seek and emulate the happy and tranquil characteristics of the gods in their day to day lives.

3.4.2. **Contemporary thought on Wellbeing**

Scholars from various disciplines have investigated various aspects of well-being, and several instruments are used to assess well-being as a short-term clinical and health outcome, and psychometric measures seeking to understand the relationship and strength of multiple indicators that comprise one or more domains of well-being over time (CDC, 2018). There are two types of indicators used to assess wellbeing: objective (observable facts) and subjective measures (the person's valuation of those facts). Positive (school success; family support) and negative (neglect, abuse) aspects of a child's life are distinguished, as are the significance of short-term, longitudinal, and personal development measures. Subjective well-being is characterized by a high level of positive affect, a low level of negative affect, and the cognitive judgement that one is content with his/her circumstances of life. More than just hedonic pleasure, it encompasses such ideals as values, goals, and need fulfillment. (Heintzelman, 2018, p. 3). Objective wellbeing, on the other hand emphasizes the idea of realizing one's full potential and finding purpose and meaning in life., through personal development autonomy and self-determination, social affiliation and positive relationships, as well as control over the environment (Rossi et al., 2017, pp. 69–70)

Despite receiving far less attention in the literature than its other pillars of respect for human rights and social justice, virtue ethics in social work addresses social workers' ethical qualities and professional integrity as they are embedded in their practices. The ethics of social work is concerned with social workers' behavior and character in the context of the social relationships and systems in which they work. (Hugman et al., 2020, p. 9). Guided by the person-in-environment approach, social work strives to accomplish its purpose through the pursuit of social and economic justice, the prevention of conditions that limit human rights, the elimination of poverty, respect for human diversity, and the improvement of the quality of life for all people

(Gamble, 2012). “Dimensions of well-being that resonate with social work values include eliminating poverty; promoting social inclusion and eliminating oppression; eliminating all forms of violence in society; increasing investments in health, education, and social supports; and the protection and restoration of environmental resources and the biosphere”(Gamble, 2012, p. 669).

Many of the clients with whom social workers work deal with live in poverty, and addressing these challenges is an important part of developmental practice. Developmental social work emphasizes the client's strengths and empowerments while also providing tangible resources to enhance their capabilities. These resources assist clients in meeting their material needs, which in turn helps them realize their aspirations and life goals, such as security, acceptance, and participation in community life, as well as living a productive, healthy, and successful life. Thus, unlike Aristotle, virtue ethics in social work empathizes the marginalized, women and children. Instead of using laws and punishments to prevent or deter bad actions, the way to build a good society is to help its members to be good people.

Virtues are attitudes, dispositions, character, and refers to certain ideals, such as excellence or dedication to the common good toward which we should strive and which allow us to act in ways that develop the full development of our humanity (Claire Andre & Manuel Velasquez, 1988). In other words, the characteristics or qualities that define a person as good in relation to her or his function or purpose are referred to as virtues. It is concerned with people's moral dispositions as they relate to what is considered good and right in a particular cultural or social context (Hugman et al., 2020). Values, on the other hand, are specific beliefs that people hold to be worthy including the purposes and meanings they ascribe to their lives, questions of right and wrong in human conduct and character, or in social relationships and systems.

These ideals are discovered through careful consideration of what we, as humans, have the potential to become. Virtues can be nurtured through education and be learned through practice (Claire Andre & Manuel Velasquez, 1988). For instance, situating self-efficacy within personal agency that operates in concert with other socio-cognitive factors in regulating human well-being, Bandura identified four major sources of self-efficacy: mastery experiences (competent performance), vicarious persuasion (observing role models successfully complete a task), verbal persuasion (providing feedback to overcome self-doubt), and psychological responses (assisting children in distress to overcome challenges) (Bandura, 1977). this research stives to further advance the premise that Ethiopian children can be taught culturally relevant topics to enhance their self-efficacy, self-esteem, and positive relationships etc.

Whether such terms as flourishing, subjective well-being, psychological well-being, life satisfaction, are synonymous or dimensions of well-being remain debatable. The use of well-being as key components in functioning, including positive emotions and psychological resources such as positive affect, autonomy, mastery is subject to further inquiry. These necessitate for social work to define wellbeing and its dimensions, and instruments and methods to measure wellbeing in the context of "helping to meet the basic human needs of all people".

This study used Bronfenbrenner's bioecological theory person-process context-time (PPCT) model, which views child development as a complex dynamic relationship influenced by multiple levels of the environment, ranging from immediate family micro level factors to broad cultural values and laws in the macro system, to operationalize these reciprocal interactions between children and environments in promoting their wellbeing over time.

SECTION FOUR: THEORETICAL FRAMEWORK

There are immense differences in how people deal with life challenges and engage with their environment to find solutions to achieve their intended goals. Two people with similar developmental trajectories at first may diverge from the norm at a certain point, and one of them might follow the normal development track, whilst the other might choose a maladaptive path. Several theories have been advanced to describe factors responsible for such differences in human development. This study is framed in such a way that bioecological theory best explains how children use their psychosocial skills navigate their respective environments and influence their own developmental outcomes. cultural and political influences. In what follows, the genesis of bioecological theory, from the pioneer works of Mary Richmond, the person-in-environment perspective to Bronfenbrenner's Person-Process-Context-Time (PPCT) model were discussed. Following a detailed description of the theory and its components, a section was devoted to explaining how the theory relates to the study problem, research question, and justifying the methodology.

The patterns of mal/adaptation are "influenced by a complex matrix of the "individual's level of biological and psychological organization, current experiences, active choices, the social context, timing of the adverse event(s) and experiences, and the developmental history of the individual" (Cicchetti & Curtis, 2006, p. 23). As such, several developmental perspectives demonstrate the fact that not all individuals who face adversities developed pathologies. The first is the principle of equifinality and multifinality, which describe the common and diverse pathways that link risk and protective factors to maladaptive and adaptive outcomes, respectively. Specifically, Equifinality is the recognition that various risk factors

can lead in outcome that are similar. Multifinality, on the other hand, is the recognition that a given risk factor may result in diverse developmental outcomes (Cicchetti & Rogosch, 1996).

4.1. Person-In-Environment Perspective

Similarly, the person-in-environment perspective has been one of the central guiding principles of social work practice, education, and research**.** shaping the way social workers understand individuals' behavior within the context of their respective environments. It has been recognized as one of the distinguishing features of social work among other helping professions. (Weiss-Gal, 2008). Mary Richmond was the first to formally conceptualize the person-in-environment framework in social work practice by imploring social workers to place more of their attention on the environment than on individuals' anomalies (Richmond, 1917).

But it was William E. Gordon who first recognized the person-environment interface when he urged social workers social workers to explore how individuals are affected by the environment and the vice versa (Gordon, 1965) He further expounded the concept by outlining six elements that are consistent with core social work values and essential for social work practice. These are, the centrality of the individual, interdependence and mutual responsibilities among individuals, the need to meet the unique and common human needs, the importance of social action to engage the society to meet its obligation by eliminating barriers to self-realization. By approaching clients' presenting problems within the context of their respective environments, and by accepting the person-in-environment perspective as one of its foundational principles, social work profession distinguishes itself from other related field such as psychology, which emphasizes the individual.

The person-in-environment approach has contributed to the development of social work by expanding its reach beyond fixing individual problems in isolation to intergroup relations, and exploring associated factors such as oppression, racism, and disenfranchisement. It has also enabled "integrate various levels of practice (casework, groupwork, family work, organizational and community work) into one relatively unified profession"(Zapf, 2010, p. 38) However, there has been a historical tension between clinical and macro practice due to the fact that social workers frequently place greater emphasis on individual interventions. This, on the other hand, is due to a number of factors, including inadequate understanding of environmental effects relative to that of human behavior and development, which is well developed (Ahmed et al., 2017).

4.2. The Ecological Approach

Using the person-in-environment perspective as its foundation, Germain and Hartman laid the groundwork for the ecological approach which is being widely used in social work practice, research, and education. The ecological perspective is a multisystem approach that encompasses the micro, mezzo, and macro systems, and it positions social work to broaden the definition of risk and vulnerability to include the person-in-environment framework. This systemic view emphasizes the importance of understanding individuals within the contexts of their respective environmental challenges and opportunities as well as the wider system. (Green & Greene, 2008, pp. 322-323) (Rebecca Davis, 2012)

Moreover, the ecological perspective views human problems as derived from the complex interplay of psychological, social, economic, political, and physical forces. The recognition of the transactional relationship between human problems and environmental conditions "shifts the focus of treatment from the client's personality and behavioral make-up to the client's interrelationship with the family, community, and other systems"(Pardeck, 1988, p. 137) The recognition of the

transactional relationship between human problems and the environment shifts the focus of intervention from the individual's behavioral to that of his/her interrelationship with the family, community, and other systems. In addition, it minimizes the conventional viewpoint that negative environments are to blame for problems with an individual's functioning. Instead, the environment influences changes in the individual's behavior, which leads the person to generate appropriate response, which eventually affect changes in the environment. (Pardeck, 1988)

4.3. Bioecological Theory

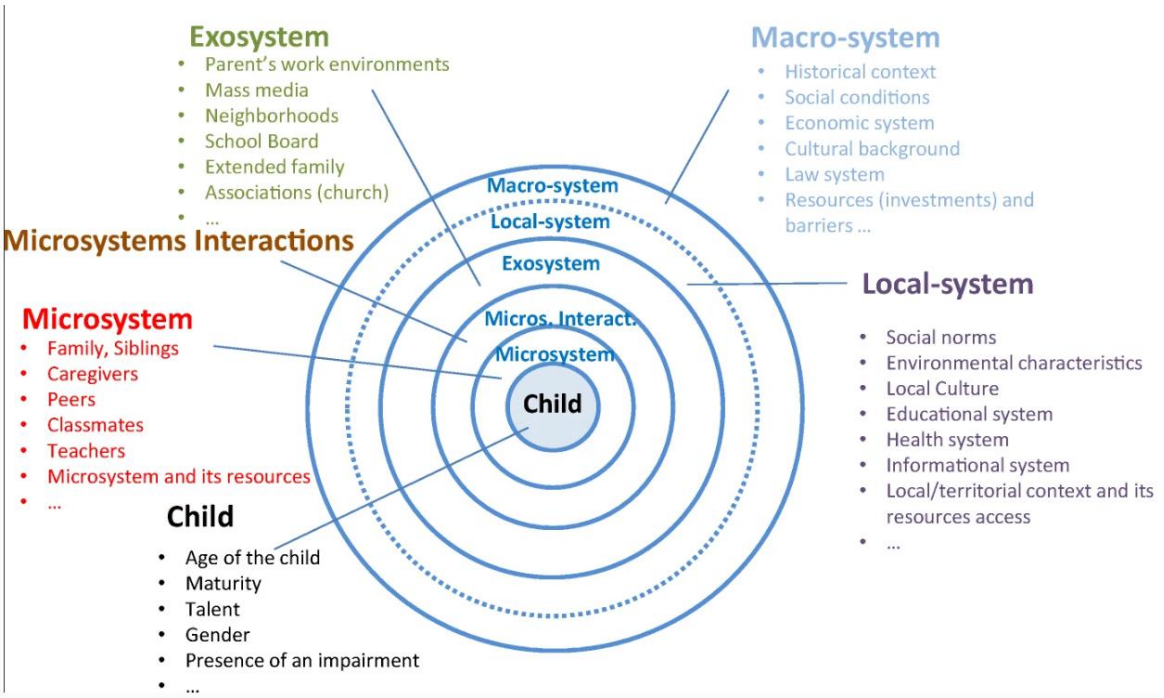
In recognition to the importance of ecological processes in development, Urie Bronfenbrenner (1917 – 2005) developed the bioecological theory of human development. He describes the bioecological theory of human development as

> "a scientific study of the progressive, mutual accommodation between an active, growing human being and the changing properties of the immediate settings in which the developing person lives, as this process is affected by relations between those settings, and by the larger contexts in which the settings are embedded"(Bronfenbrenner, 1979, p. 21)

He defined human development as "the phenomenon of continuity and change in the biopsychological characteristics of human beings, both as individuals and as groups …extends over the life course, across successive generations, and through historical time" (Urie Bronfenbrenner & Pamela Morris, 2007, p. 793). Furthermore, human development takes place through complex reciprocal interaction between an active human organism and the persons, objects, and symbols in its immediate external environment (Ashiabi & O'Neal, 2015). The ecological environment consists of nested structures, ranging from immediate settings like home

or school to mezzo and macro level interactions that impact family, employment, culture, and institutions. The interactions between these settings are crucial for a child's development, making the theory highly comprehensive and relevant in understanding the intricate dynamics of human growth. The diagram below depicts how a child's micro, mezzo, and macro systems are organized.

Figure 4.1. Children's Environment



Source: (Biggeri & Cuesta, 2021, p. 829)

In this perspective, the child's biology is acknowledged as the primary factor influencing development. However, the child's genetic potential can only be fully realized and optimized within the context of their immediate family, community, and broader societal environment. Genetic influences are meaningful when they interact with the child's surroundings, but they are not sufficient on their own to guarantee effective developmental functioning. The interplay between genetic factors and the environment is crucial, as a favorable environment can enhance positive outcomes, while a challenging context may hinder a child's developmental progress.

Therefore, the child's biology and genetic endowment should be understood in relation to the broader ecological context to fully comprehend the factors that shape their developmental trajectory. (Bazire & Brézillon, 2005; Bronfenbrenner & Ceci, 1994)**.**

Moreover, Bronfenbrenner developed the person-process context-time (PPCT) model to operationalize the bioecological theory. By situating the individual at the center surrounded by his/her immediate environment and the broader ecosystems, the PPCT model facilitates the analysis of the reciprocal interaction between the person and the environments which have considerable influence in promoting or impeding human development. The model generally consists "three types of person characteristics, four types of context, and three ways of conceptualizing time, all of which simultaneously engage in subtle interaction in the course of ever-changing proximal processes"(Tudge, 2016, p. 196) The latter serves as mechanisms for actualizing genetic potential and effective psychological functioning. (Bronfenbrenner & Ceci, 1994)

The reciprocal interactions between children and their immediate contexts, as well as the proximal processes, play a significant role in shaping individuals' capacities. These interactions enable individuals to differentiate perception and response, meaning they can perceive and interpret their environment and respond accordingly. Additionally, they can direct and control their own behaviors, allowing for self-regulation and decision-making. Successful coping under stress is facilitated through these interactions, enabling individuals to manage challenges effectively. Acquiring knowledge and skills is also influenced by these processes, as they support learning and development. Furthermore, individuals can establish and maintain mutually rewarding relationships, fostering social connections. Lastly, through these reciprocal interactions, individuals can modify and construct their own physical, social, and symbolic environments,

actively influencing and shaping their surroundings. Overall, these dynamic interactions are integral to human development and the realization of individual potential and capacities.(Zhou, Molly & Brown, David, 2015*)*

Bronfenbrenner emphasized proximal processes highlights the crucial role of interactions closest to the developing child in influencing their development. These proximal processes encompass the dynamic interactions between the child and their immediate environment, such as family, peers, and community, which have a significant impact on the child's developmental outcomes. Additionally, Bronfenbrenner recognizes the child's agency as a developmental outcome, representing the actualization of their potential in various domains. This agency manifests through the child's ability to perceive and respond differently, direct their own behavior, cope effectively under stress, acquire knowledge and skills, establish positive relationships, and actively shape their physical, social, and symbolic environment. These aspects of agency showcase the child's active role in their own development, engaging in reciprocal interactions with their surroundings and contributing to the shaping of their developmental trajectory."(Wassmann & Stockhaus, 2007, p. 59) The following table provides detailed description of the PPCT model.

Table 1 Description of the PPCT Model.

PPCT Components	Subsystems	Definitions
Proximal Processes	N/A	A "progressively more complex reciprocal interaction between an active, evolving biopsychological human organism and the persons, objects, and symbols, in its immediate external environment. To be effective, the interaction must occur on a regular basis and over extended periods. Symbols and languages are important to understand “the formulation of intentions, goals, and actions”
Context	Microsystem	A pattern of activities, social roles, and interpersonal relations experienced by the developing person in a given setting with physical, social, and symbolic features that invite, permit, or inhibit engagement in sustained, progressively more complex interaction with, and activity in the immediate environment and containing other persons with distinctive characteristics of temperament, personality, and system of beliefs Bronfenbrenner 1645.
	Mesosystem	comprises the linkages and process taking place between two or more settings containing the developing person
	Exosystemic	"Encompasses the linkages and processes taking place between two or more settings, at least one of which does not ordinarily contain the developing person, but in which events occur that influence processes within the immediate setting that does contain that person

	Macrosystem	Consists of the overarching pattern of micro, mezzo, and exosystems characteristic of a given, culture, subculture, or other broader social context, with reference to the developmentally instigative belief systems, resources, hazards, lifestyles, opportunity structures of life course options, and patterns of social interchange that are embedded in each of these systems
Time	Microtome	Refers to continuity versus discontinuity in ongoing episodes of proximal processes
	Mestome	The periodicity of these episodes across broader time intervals
	Microtome	Focuses on the changing expectations and events in the larger society, both within and across generations, as they affect and are affected by, processes and outcomes of human development over the life course.
Persons Characteristics	Demand	Acts as an immediate stimulus that promotes or discourages reaction from persons, objects, and symbols in the immediate environment
	Resource	Those that are not immediately discernable, but include variation in mental, emotional, social resources, and past experiences needed to effectively engage in proximal processes at a given stage of development
	Force	Personal disposition that "set proximal processes in motion, and//or sustain their operation such as temperament, motivation, and persistence. Conversely, they interfere with or prevalent proximal processes from occurring

Source : (Bronfenbrenner & Morris, 2006)

These person Characteristics are further elaborated as follows:

4.3.1. Demand characteristics

Demand characteristics play a crucial role in human development, influencing how individuals interact and respond to their environment. These observable features, such as gender, skin color, age, attractiveness, shyness, and happiness, can invite or discourage reactions from others and shape the social interactions and experiences of individuals. Additionally, certain conditions that limit or disrupt the functional integrity of the organism, such as genetic defects, low birthweight, physical handicaps, severe and persistent illness, or damage to brain function through accident or degenerative processes, can also act as demand characteristics. These characteristics set processes in motion, acting as "personal stimulus" characteristics, affecting how individuals perceive and respond to their surroundings and influencing their developmental outcomes and experiences.(Bronfenbrenner & Morris, 2006; Navarro & Tudge, 2022)

4.3.2. Resource characteristics

Competence impeding biopsychological liabilities, like illness and social impairments, and competence promoting assets, such as skills, knowledge, and abilities, are examples of resource characteristics within Bronfenbrenner's bioecological theory. These resource characteristics significantly influence a person's capacity to effectively engage in proximal processes, which are the key interactions that shape development. Developmental assets and material resources, such as access to housing, education, and responsive caregivers, are vital components of proximal processes as they contribute to the progressively complex patterns of interaction that impact individuals' developmental trajectories. By recognizing the significance of these resource

characteristics, we gain a deeper understanding of how various factors interact to shape human development within their ecological context. Bronfenbrenner & Morris (2006)

4.3.3. Force characteristics

Force characteristics, as described in Bronfenbrenner's bioecological theory, encompass individual differences in various psychological attributes that influence an individual's overall psychological functioning and behavior. These characteristics can include temperament, motivation, persistence, cognitive processes, emotional tendencies, social abilities, and other psychological dimensions. Force characteristics play a significant role in shaping an individual's developmental trajectories, as they interact with other ecological factors to influence how a person responds and adapts to their environment. Understanding force characteristics helps us comprehend the unique ways in which individuals interact with their surroundings and how these interactions contribute to their developmental outcomes.

Even if children have equal access to external resources, their developmental outcomes can differ significantly based on their individual behavioral dispositions, or force characteristics. Motivation, persistence, and other active orientations play a crucial role in shaping how children engage with their environment and interact with proximal processes. Children who display generative characteristics such as curiosity, initiative, and a willingness to defer immediate gratification for long-term goals are more likely to thrive and make positive developmental progress. On the other hand, disruptive dispositions like impulsiveness, inattentiveness, and withdrawal from activity can hinder a child's engagement in proximal processes and impede their overall development. Understanding the influence of force characteristics helps us appreciate the dynamic and individualized nature of human development, as it recognizes the significance of an

individual's innate tendencies and behavioral dispositions in shaping their developmental trajectories. (Tudge et al., 2009)

Overall, force characteristics play a crucial role in an individual's developmental outcomes, influencing them in either a generative or disruptive manner. Disruptive dispositions hinder a person's engagement in proximal processes, manifesting as difficulties in emotional and behavioral control, impulsiveness, distractibility, and withdrawal from activity. In contrast, generative characteristics, such as curiosity, initiative, and responsiveness, promote active participation and pursuit of long-term goals. Understanding these force characteristics is essential as they provide insights into how individuals' innate tendencies interact with their environment to shape their developmental journey. (Rosa & Tudge, 2013; Bronfenbrenner & Morris, 2006)

Table 2 Child Characteristics

Force Characteristics		**Resource Characteristics**		Demand
developmentally Degenerative	Developmentally generative	Liabilities	Assets	Characteristics
• impulsiveness • explosiveness • distractibility • inability to defer gratification • apathy • inattentiveness • unresponsiveness • lack of interest in the surroundings • feelings of insecurity	• curiosity • initiate/engage in activities alone/with others • responsiveness to initiatives by others • defer immediate gratification to pursue long-term goals"	• illness • social impairments • physical disabilities • past experiences • intelligence • Access to resources: - o housing o Amenities o Health o education o responsive caregivers' responsiveness	• skills • knowledge • abilities	• gender • age • attractiveness • shyness • happiness • genetic defects • low birthweight • physical handicaps • severe/persistent illness • damaged brain/ degenerative processes

Source: - (Bronfenbrenner & Morris 2006 p.810-814)

4.4. Contextualizing the Research

The bioecological model recognizes that children's development is influenced by multiple nested systems, with the household having the most significant impact. The household system, in turn, is influenced by factors from the workplace, school system, and other family members. These contexts are further influenced by neighborhood safety, available resources, and community support. All of these systems are embedded within larger socio-economic, cultural, and political influences. By centering the analysis on the child and employing the Process-Person-Context-Time (PPCT) model, the research aimed to comprehend how these interconnected systems, including the household, community, and macro factors, collectively shape developmental outcomes. The study used longitudinal data modeling to capture children's experiences from preteen years to adulthood, considering the effects of time and the accumulation of experiences throughout their developmental journey.

Indeed, the study sought to explore the mechanisms through which psychosocial factors influence a child's developmental outcomes over time. As children grow and mature, they develop what Bronfenbrenner referred to as "directive beliefs," which represent their ability to articulate their own perspectives about themselves and their relationship with the environment. These belief systems are akin to the concept of self-efficacy, which involves a cognitive self-evaluation of an individual's competence to control their own motivational behavior and navigate the social environment. It also encompasses an individual's belief in their capability to undertake the necessary actions to achieve specific goals. By examining these psychosocial factors, the research seeks to gain a deeper understanding of how children's belief systems and self-perceptions impact their developmental trajectories and overall well-being over time (De La Cruz et al., 2021; Hegde & Shetty, 2020). Individuals with a strong self-efficacy approach life challenges as setback that

can be overcome by committing commensurate efforts to the challenges rather than as threats to be avoided. (Bandura, 1994, p. 1)

However, unlike self-efficacy, direct belief systems are "conceptualized primarily not as characteristics of the person sufficient unto themselves but as directional dispositions interacting synergistically with particular features of the environment to generate successive levels of developmental advance"(Bronfenbrenner & Morris, 2006, p. 811). In other words, as much as the environment influences personal characteristics, the latter can also shape the environment to suit its need. While demand and resource characteristics affect the way other people act towards a person and the vice versa, Bronfenbrenner notes that even when children have equivalent access to resources their developmental courses may differ as a function of characteristics such as drive to succeed and persistence in the face of hardship (Tudge et al., 2009, pp. 200–201).

SECTION FIVE: THE RESEARCH QUESTION

The primary objective of this study was to explore the ways in which Ethiopian children navigate the challenges posed by their adverse environments and how these experiences influence their developmental trajectories. Grounded in Bronfenbrenner's ecological systems theory, the research focused on understanding the complex interactions between individuals and their environments in shaping developmental outcomes. Equifinality and multifinality concepts were considered, acknowledging that individuals with similar early experiences may follow different paths, while those with diverse experiences can converge on similar outcomes. The research questions were designed to empirically examine the bioecological framework's applicability to Ethiopian children's development. Specifically, the study investigated the impact of the microsystem on a child's well-being and the collective influence of child characteristics on their well-being. Additionally, the study explored how psychosocial competence and risk/protective factors jointly predict well-being, with a hypothesis suggesting that psychosocial skills have a more substantial influence on well-being than risk factors. By addressing these research questions, the study provided valuable insights into the mechanisms and factors contributing to the resilience and positive outcomes of Ethiopian children despite facing challenging circumstances.

Individuals' reactions to adversity and their interactions with the external environment can lead to diverse outcomes, even when they share similar developmental paths initially. Some individuals may effectively adapt and return to a normal developmental trajectory, while others may experience maladaptive outcomes. Equally, individuals with similar early experiences can follow divergent paths (multifinality), while those with different early experiences can converge on similar outcomes (equifinality). These patterns are shaped by a complex matrix of factors,

including the individual's level of bioecological organization, the socioeconomic context they are situated in, and the timing of adverse events. Such a nuanced understanding of developmental processes highlights the dynamic and individualized nature of human development, acknowledging the interplay between various factors in shaping life trajectories. Cicchetti & Curtis, (2006).

According to Bronfenbrenner's ecological systems theory, the term "developmental trajectory" refers to the process of developing a complex process that influences an individual's choices and behaviors to meet his/her developmental goals within the context of the surrounding environment. Drawing on concept of developmental trajectory and adopting the approaches of equifinality and multifinality, this study aims to better understand the path and mechanisms by which Ethiopian children overcome challenges and influence the pace and direction of their own developmental outcomes.

The research tries to respond to the following research question?

Research Question 1: Does empirical evidence support the presented bioecological framework for developmental trajectory among Ethiopian children?

H1: The Microsystem has a significant influence on a child's well-being.

Research Question 2: To what extent do specific child characteristics (gender, psychosocial) collectively affect the well-being of Ethiopian children.

H1: Child level risk factors are significant predictors of psychosocial skills and wellbeing.

H2: Psychosocial skills have a significant influence on wellbeing.

H3: When both psychosocial skills and risk factors are considered simultaneously, psychical skills predict wellbeing significantly better than risk factors.

SECTION SIX: RESEARCH METHODOLOGY

In Section VI, the research methodology for the study is presented. The research design utilizes a quantitative mediation analysis based on data from waves 4 and 5 of the Young Lives Project, focusing on 814 children in the older cohort from Ethiopia. The primary objective is to explore the causal relationship between early childhood experiences and developmental outcomes, with a specific emphasis on assessing the resilience of Ethiopian children. The study aims to investigate how psychosocial skills mediate the impact of various environmental factors on children's developmental outcomes. The Young Lives survey collected data on multiple factors influencing child development, and data from waves 4 and 5 were chosen for their consistency in psychosocial variables and better analysis results.

The research follows Bronfenbrenner's hypothesis and the PPCT model, emphasizing the mediating role of psychosocial skills in the relationship between adverse childhood experiences and developmental outcomes. Structural Equation Modeling (SEM) was used for the analysis, examining the significant relationships between the independent variable, mediating variable, and dependent variable. Longitudinal perspective was incorporated, considering the temporal order of effects in evaluating developmental processes over time. The source of data is the Young Lives Project, which tracked the lives of 3,000 children in Ethiopia through five rounds of surveys. The study's sample size comprises 814 older cohort children born in 1994/95, representing diverse populations to understand childhood experiences' dynamic impact on later wellbeing.

6.1. The Research Design

The research study involves a quantitative mediation analysis utilizing data from waves 4 and 5 of the Young Lives Project, which includes 814 children in the older cohort. The primary aim of the study is to explore the causal relationship between early childhood experiences and developmental outcomes, with a specific focus on assessing the resilience of Ethiopian children. The study also aims to examine how psychosocial skills mediate the impact of various environmental factors on children's developmental outcomes (Pankhurst & Woldehanna, 2014)

The Young Lives survey, conducted in five rounds, gathered data on various factors, including specific child characteristics, information about the primary caregiver, household circumstances, local economic conditions, and the overall community environment, all of which can influence a child's development. The decision to utilize data from waves 4 and 5 was based on the greater consistency of psychosocial variables in these waves compared to earlier waves, as indicated in Table. Additionally, the initial attempt to conduct basic mediation analysis using data from the second wave did not yield satisfactory results, prompting the focus on the later waves for a more robust analysis.

6.2. Procedures

The study draws on Bronfenbrenner's hypothesis, which suggests that developmental outcomes at Time 1 indirectly impact developmental outcomes at Time 2 through their influence on proximal processes during the intervening period. This perspective aligns with the conceptualization of the PPCT (Person-Process-Context-Time) model as one involving mediation. (Navarro et al., 2022) Guided by bioecological theory, the research posits that children's psychosocial skills act as a mediating factor in the relationship between adverse childhood experiences and developmental outcomes over time.

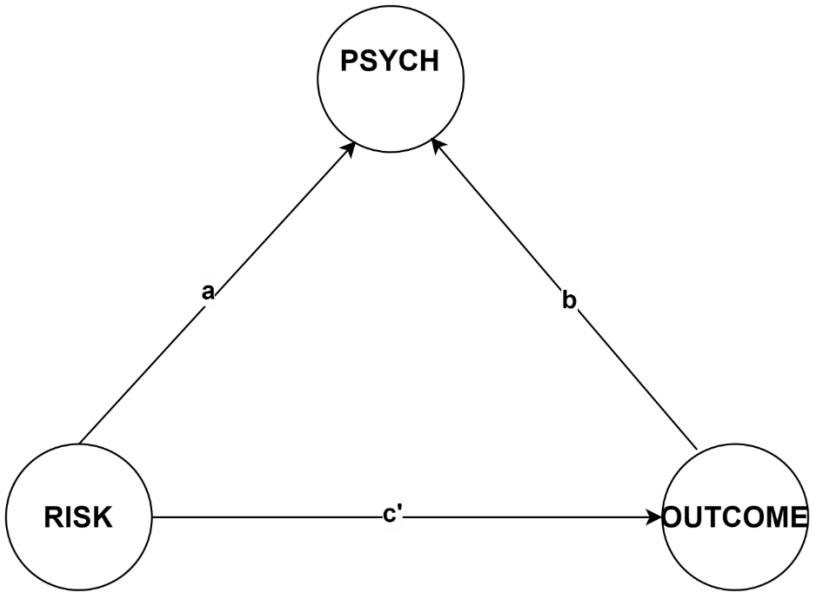
The SEM model results from Round 4 and Round 5 were examined using Kenny and colleagues' approach(MacKinnon et al., 2007) to causal mediation, which involves assessing whether the following conditions are met:

1. There should be significant relationships between the independent variable and the dependent variable and between the independent variable and the mediating variable.
2. The mediating variable must be significantly related to the dependent variable when both the independent variable and the mediating variable are included as predictors in the model.
3. The coefficient of the independent variable predicting the dependent variable should be larger (in absolute value) than the coefficient of the independent variable predicting the dependent variable when the mediating variable is also included in the model.

These conditions indicate that for mediation to occur, there needs to be evidence of both a significant indirect effect of the independent variable on the dependent variable through the mediating variable and a significant direct effect of the independent variable on the dependent variable.

The path diagram in Figure 2 provides a visual representation of the interrelationships between risk factors, psychosocial competence, and wellbeing,

Figure 2 Basic Mediation Model



In a simple mediation diagram, path coefficient "c'" represents the direct effect of the independent variable (risk factors) on the dependent variable (developmental outcomes). It indicates the amount of change in the dependent variable for a one-unit change in the independent variable, while controlling for the mediator variable (psychosocial). On the other hand, path coefficient "a" represents the effect of the independent variable (risk factors) on the mediator variable (psychosocial). It indicates the amount of change in the mediator variable for a one-unit change in the independent variable, while keeping other independent variables constant. Similarly, path coefficient "b" represents the effect of the mediator variable (psychosocial) on the dependent variable (developmental outcomes). It indicates the amount of change in the dependent variable for a one-unit change in the mediator variable, while keeping other independent variables constant.

Perfect mediation occurs when the mediator variable fully explains the relationship between the independent variable and the dependent variable, resulting in the direct effect of the independent variable on the dependent variable becoming zero. In partial mediation, the mediator variable reduces the strength or magnitude of the direct effect between the independent variable and the dependent variable, but it does not eliminate it entirely. There is still a remaining direct association between the independent variable and the dependent variable that is not mediated by the mediator.(MacKinnon et al., 2007)

Under the assumption that psychosocial mediator variable, (M) explains the causal relation between the risk/protective variable, (X) and the wellbeing variable, (Y), the model can also be represented by the following equations.

$Mt = aXt + eM$, and (1)

$Yt = bMt + c'Xt + eY$ (2)

The mediation equation $Mt = aXt + eM$ represents the relationship between the mediator variable (Mt) and the independent variable (Xt). The coefficient 'a' represents the direct effect of Xt on Mt, indicating how much Mt changes for each unit change in Xt. The term 'eM' represents the error or unexplained variance in Mt that is not accounted for by the relationship with Xt.

On the other hand, the second equation $Yt = bMt + c'Xt + eY$. represents the relationship between the dependent variable (Yt) and the mediator variable (Mt) and the independent variable (Xt). The coefficient 'b' represents the direct effect of Mt on Yt, indicating how much Yt changes for each unit change in Mt. The coefficient 'c" represents the direct effect of Xt on Yt, indicating how much Yt changes for each unit change in Xt, independent of the influence of Mt. The term 'eY' represents the error or unexplained variance in Yt that is not accounted for by the relationship

with Mt and Xt. In this mediation model, Xt has both a direct effect on Mt (a) and an indirect effect on Yt through Mt (b). The indirect effect is the effect of Xt on Yt that is mediated through the mediator Mt. The total effect of Xt on Yt is the sum of the direct effect (c') and the indirect effect (a * b).

To examine the relationships and potential mediation effects for different cohorts of children, separate structural equation modeling (SEM) models were constructed for each cohort based on their respective survey rounds. Specifically, two SEM models were created for the Round 4 cohort, which was surveyed at 12 years old, and the Round 5 cohort, surveyed at 19 years old. In each cohort's SEM model, the variables measured at their corresponding survey rounds were included. These separate SEM models provide a means to investigate the relationships and potential mediation effects within each cohort, capturing the unique dynamics at their respective survey rounds. By estimating the path coefficients (a, b, c') in each model, it will be possible to assess the significance and strength of the relationships for each cohort, shedding light on the potential mediation effects and their implications for different stages of development.

The selection of specific variables and relationships within the models was based on two main considerations: the available data for each cohort and its amenability to fit the model in question. Exploratory Factor Analysis (EFA) was employed to identify latent variables or underlying factors that account for the observed correlations among a set of variables. This analytical process involves several key steps, including determining the optimal number of factors to extract and identifying the variables that contribute most significantly to each factor. Factor loadings were computed to assess the strength and direction of the relationship between each observed variable and each latent variable. Variables with factor loadings equal to or greater than 0.4 on a specific factor are considered to have a stronger association with that particular factor.

Following Cole & Maxwell (2014), the total direct effect X1->Y5 will be aby+abx+abm, or =ab(m+x+y). In the following path diagram red arrows denote the mediation path while black arrows represent the direct effects. The direct effect is the sum of coefficients that start with X1 and end with Y5 without passing through M. The mediation path is as follows.

X1 ->x2->Y3 ->Y4 ->Y5 (cy^2)

X1->X2 ->Y3 ->Y4 ->Y5 (cy^2)

X1->X2 ->X3 ->Y4 ->Y5 (cxy)

X1->X2 ->X3 ->X4 ->Y5 (cx^2)

→ $cxy + cy^2 + cx^2$, → $c= (xy+x^2+y^2)$

It should also be noted that the model can be disaggregated to analyze the effect of each risk/protective factor on developmental outcomes. For example, if we want to measure the effect of micro variables on children's outcome, we can disaggregate the composite risk/protective variable (X) into its component parts as

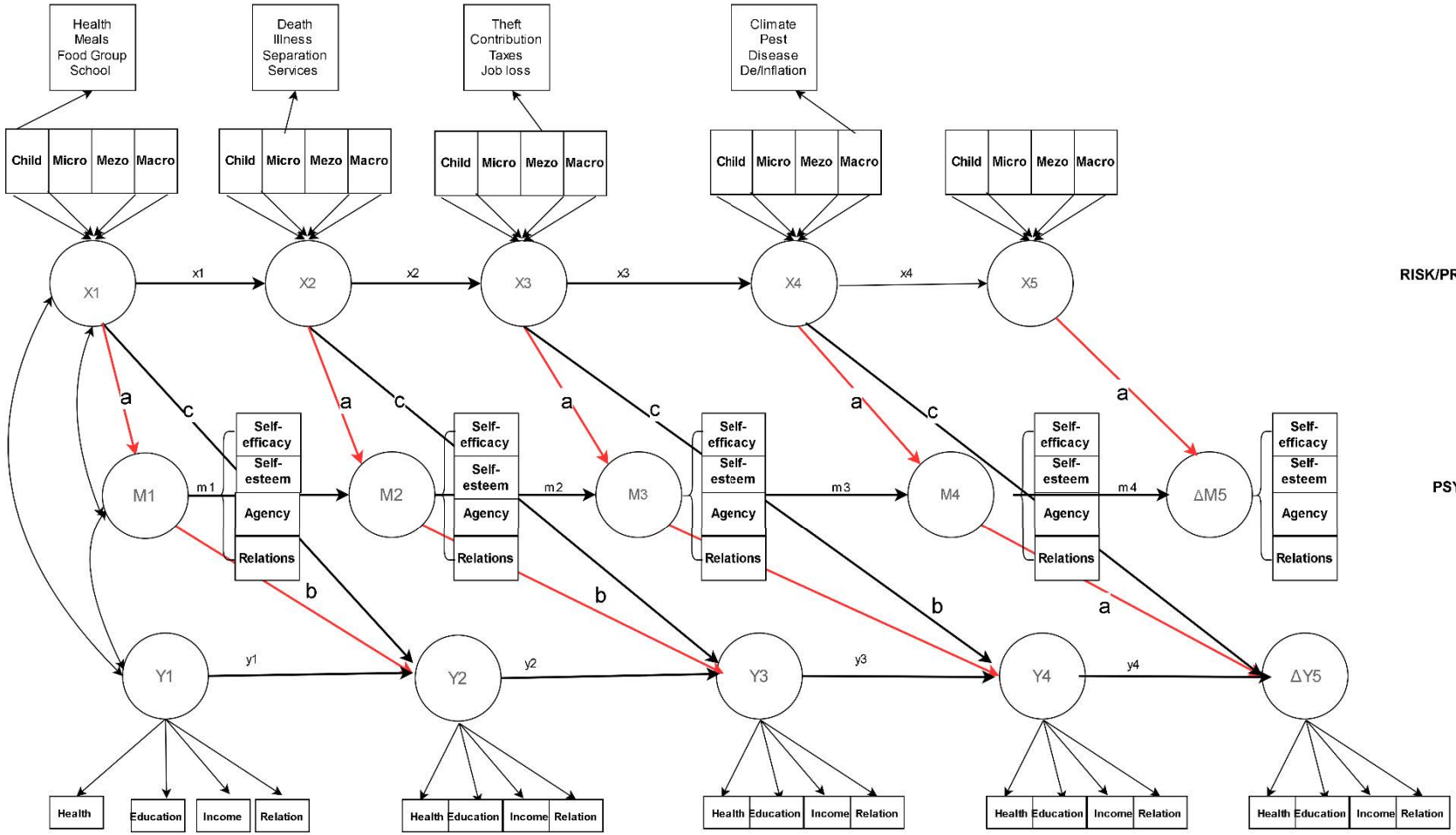
Micro1 → M1 → Y1

Similarly, if we just want to understand how climate shock affects developmental outcome, we can disaggregate the macro composite index into climate shocks, legislative and economic shocks shown in Section 6.4.1, and analyze climate shock as

Climate Shock1 → M1 → ΔY1

Please note that the following extended Structural Equation Modeling (SEM) model (Figure 3) should be reviewed alongside the flow chart (Figure 7) displayed on page 117.

Figure 3:
Extended SEM Model



6.3. Longitudinal Perspective

Most mediation analysis research focuses on a single risk/protective factor, a single mediator and a single developmental outcome occurring at a single point in time, ignoring the temporal sequence of these variables. Furthermore, when compared to longitudinal parameters, cross-sectional designs produce significantly biased estimates with a weak causal claim.(Sullivan et al., 2021) Instead of relying on the "pervasive reliance on cross-sectional designs and models for assessing mediation"(Preacher, 2015, p. 828), longitudinal mediation models are well-suited for studying how childhood risk/protective factors influence later developmental outcomes, and evaluate other intraindividual change its determinants. Such an analysis allows one to describe the temporal order of effects in evaluating developmental processes over time by allowing the determination of whether an outcome of interest is dependent on the amount of time elapsed (Simone & Lockhart, 2019) It also helps capture both within-individual dynamics and between individual differences over time, presenting more accurate representations of the temporal order of change over time that can lead to more accurate conclusions about mediation (Selig & Preacher, 2009)

Structural Equation Modeling (SEM) is a statistical method that is increasingly being used in the field of social research. It has a distinct advantage over the traditional multivariate methods such as regression analysis, in that it examines the causal relationships not only between manifest variables but also unobserved latent variables that cannot be directly measured within a single model. Furthermore, SEM allows for the visualization of causal pathways, in which the hypothesized cause-effect relationships are represented as arrows connecting variables of interest.(Civelek, 2018). Specifically, SEM is an important instrument for mediation analysis, which assumes that both causality and a temporal ordering of the variables under study. Because

(SEM) considers variables in a causal relationship as both causes and effects, it provides a better framework for performing mediation analysis than the standard regression, which assigns each variable as either a cause or an effect.(Gunzler et al., 2013)

To examine the relationships and potential mediation effects for different cohorts of children, separate structural equation modeling (SEM) models were constructed for each cohort based on their respective survey rounds. Specifically, two SEM models were created for the Round 4 cohort, which was surveyed at 12 years old, and the Round 5 cohort, surveyed at 19 years old. In each cohort's SEM model, the variables measured at their corresponding survey rounds were included. These separate SEM models provide a means to investigate the relationships and potential mediation effects within each cohort, capturing the unique dynamics at their respective survey rounds. By estimating the path coefficients (a, b, c') in each model, it will be possible to assess the significance and strength of the relationships for each cohort, shedding light on the potential mediation effects and their implications for different stages of development.

The selection of specific variables and relationships within the models was based on two main considerations: the available data for each cohort and its amenability to fit the model in question. Exploratory Factor Analysis (EFA) was employed to identify latent variables or underlying factors that account for the observed correlations among a set of variables. This analytical process involves several key steps, including determining the optimal number of factors to extract and identifying the variables that contribute most significantly to each factor. Factor loadings were computed to assess the strength and direction of the relationship between each observed variable and each latent variable. Variables with factor loadings equal to or greater than 0.4 on a specific factor are considered to have a stronger association with that factor.

6.4. Source of Data and Participants

The research uses the extensive dataset provided by the Young Lives Project that investigates the changing nature of childhood poverty in four developing countries; Ethiopia, India, Peru and Vietnam with the view to understand the causes and consequences of childhood poverty, and thereby inform policy measure that target child wellbeing. Young-Lives Ethiopia, through its five rounds of surveys, tracked the lives of 3,000 children comprised of 2,000 children born in 2001/2 and 1,000 children born in 1994/5. Purpose sampling is used to select twenty sentinel sites or clusters considered to represent the entire population covering diverse geographic, material and social attributes of children that are useful to understand the relationship and dynamic impact of childhood experiences on the welfare of children later in life. Then, 100 children from the younger cohort and another 50 children from the older cohort were randomly selected from each site (Pankhurst & Woldehanna, 2014)

The sample size for this study was 814 children, data representing the older cohorts who were born in 1994/95, and those who responded to feelings and attitudes questionnaire. In the context of Ethiopia, where gender differences, urban/rural disparities, ethnicity, and other factors were pervasive and contributed to adversity and subsequent outcomes, the decision to consider the entire cohort rather than further sampling was deemed appropriate. By including the entire cohort, the study aimed to capture the diverse and complex realities experienced by different groups and avoid excluding specific vulnerable populations. This approach allowed for a more comprehensive understanding of how these various factors interacted and influenced the developmental trajectories and outcomes of Ethiopian children facing adversity. It also ensured that the research findings could be more broadly applicable and representative of the population under study,

providing valuable insights for informing policies and interventions to support children's well-being in the country.

6.5. Instruments

The selection of indicator data for independent and dependent variables was guided by Bronfenbrenner's child characteristics framework, which encompasses three essential components: resource, force, and demand characteristics. These components represent distinct aspects of a child's environment and experiences that are crucial in shaping their developmental outcomes. As has been explained earlier, resource characteristics refer to the availability of supportive and enriching elements in a child's immediate environment, such as access to quality education, a nurturing home environment, and positive social support. Force characteristics encompass the individual attributes and personal qualities that a child possesses, such as their cognitive abilities, emotional resilience, and temperament, which can influence how they respond and adapt to different situations. Lastly, demand characteristics encompass the expectations and demands placed on a child by their surrounding environment, including societal norms, cultural practices, and parental expectations. By utilizing this comprehensive framework, the study captured the multifaceted nature of child development to gain a better understanding of how these distinct characteristics interact and shape children's developmental trajectories over time. This approach allowed for a more holistic and nuanced exploration of the factors that contribute to children's well-being and development, providing valuable insights for future research and the development of targeted interventions to support positive developmental outcomes.

6.5.1. Independent Variables

Risk/protective factors assessed at the individual and household-levels as well as community and macro-levels are summarized as follows:

Table 3 Summary of Risks/Protective Factors

Child Level Risks	Household Level	Community Level	Macro Level
• Health (Visible Differences) • Dietary Diversity • Education (Time use) • Social Capital	• Caregiver's Depression • Socioeconomic status • Victim of crimes • Illness/divorce/death	• Neighborhood safety • Access to Services • Social Capital	• Climate Shocks • Legislative Shocks • Economic Shocks

6.5.1.1. Child-level Risks/Protective Factors

Table 4 Summary of Child-level Risk Variables

Time Spent Hours/day	Dietary Diversity	Health Problems	Social Capital
• Sleeping • Household chores • Domestic tasks • Paid activity • At school • Studying • Leisure activities	• Eggs, • Starches (grains roots) • Legumes & nuts • Dairy • Fruit and vegetables • Fats and oils. • Dairy products, • Meat, fish, poultry	• Vision • Memory • Mobility • Speech	Received helps in • Studies at school • Issues at home • Teased or bullied • Religious matter • Pocket money • Getting to school • play with friends

6.5.1.1.1. Dietary diversity

The quality of nutrition intake has an impact on their survival, growth, and a child's development. Malnutrition caused by unbalanced food intake of essential nutrients remains a global issue. Particularly, children in poor households face nutrient deficiencies as a result of eating monotonous and high-energy starchy foods with little variety in their diets that lack adequate essential vitamins and minerals (Kupka et al., 2020) The dietary diversity score has been widely used as a proxy to measure nutrient adequacy. A study in Bangladesh found a link between household income and food security, and hence dietary adversity (Ali et al., 2019) The dietary diversity score has been widely used as a proxy for nutrient adequacy, (Christian et al., 2019) Researchers in Ethiopia have also shown urban-rural divide in nutrient intake using a dietary diversity score.. (Mekonnen et al., 2020)

Young lives collected food consumption data based on the Food and Agriculture Organization (FAO) guidelines for individual dietary diversity (Kennedy et al., 2011). The present study will use the combined responses of the following food groups to calculate a dietary diversity index.

starches (cereals, grains, roots, and tubers)
legumes and nuts,
eggs,
fruit and vegetables,
fats and oils.
vitamin A–rich fruits and vegetables
dairy products,
meat, fish, poultry, and liver/organ meats

6.5.1.1.2. Frequency of Meals

The recommended frequency of meals for adolescents is typically three main meals per day (breakfast, lunch, and dinner) along with healthy snacks in between. This pattern allows for regular and balanced nutrient intake to support their growth and development**.** Young Lives survey collected the following data on the number of meals a child had in the past 24-hours. The sum of the yes/no responses were calculated to form the meal index.

Any food before a morning meal?

A morning meal (breakfast)

Any food between morning and midday meals?

A midday meal?

Any food between midday and evening meals?

An evening meal?

Any food after the main evening meal?

6..5.1.1.2. Health

As discussed in the Literature Review section, children with visible differences face several challenges including emotional and behavioral difficulties, negative perception of themselves and lack of confident as learners, all of which have negative impact on developmental outcomes. (Jewett et al., 2018b; Swift et al., 2021b) They are also considered less competent, subject to physical and social exclusion and face prejudice, stigmatization and discrimination (Babik &

Gardner, 2021b; Feragen et al., 2022b; Ysasi et al., 2018b) As a result, it is critical to include the voices of such children, as well as those with mental and other long-term health issues, in the discourse about children's development.

The sum of the yes/no responses to the following questions in the Young Lives Survey specifically dealing with visible differences, were used to calculate the health index.

Do you have difficulty seeing, even if wearing glasses?

Do you have difficulty hearing, even if using a hearing aid?

Do you have difficulty walking or climbing steps?

Do you have difficulty remembering or concentrating?

Do you have difficulty (with self-care such as) washing all over or dressing?

Using your usual (customary) language, do you have difficulty communicating?

6.5.1.1.3 Education

Among the plethora of child-level risk factors for school readiness, attendance, and educational outcomes, distinguishing between school-related activities such as time spent at school and studying outside school and non-school-related activities, including time spent in paid work and household chores as well as leisure activities may provide insights into how these activities impact their performance. A study indicated that low-performing students can raise their academic performance by increasing their study time(Spitzer, 2022). According to a study in India, the amount of time adolescents spent at school, studying sleeping, and playing have a positive influence in the development of psychosocial skills (Hoorani et al., 2022).

6.5.1.1.4. Social Support

Lack of social support is significantly associated with internalizing behavior, substance use, perpetration of bullying and victimization, indicating its contribution in lowering the likelihood of negative psychosocial outcomes of children, social support in the form of emotional or material resources can mitigate the effects of negative psychosocial outcomes such as depression, anxiety, and social isolation and promote wellbeing. It can also promote wellbeing by fostering an environment in which children realize their potential for personal growth and development. (Dambi et al., 2018; Feeney & Collins, 2015; Heerde & Hemphill, 2018)

Children's social capital will be evaluated based on the frequency of a child playing with friends and the perceived amount of support available in times of need. A social capital index will be computed based on average responses to whether a child is member in sport/student groups, his/her frequency of contact with friends, and the availability of someone who would help with studies at school, pocket money, problems at home, religious matters etc.

Table 5 Summary of Child-level Risk Variables

Time Spent Hours/day	Dietary Diversity	Health Problems	Social Capital
• Sleeping • Household chores • Domestic tasks • Paid activity • At school • Studying • Leisure activities	• Eggs, • Starches (grains roots) • Legumes & nuts • Dairy • Fruit and vegetables • Fats and oils. • Dairy products, • Meat, fish, poultry	• Vision • Memory • Mobility • Speech • Serious illness/injury • Long-term problems •Permanent disability	Received helps in • Studies at school • Issues at home • Teased or bullied • Religious matter • Pocket money • Getting to school • play with friends

6.5.2. Household-level Risk/protective Factors

Household-level risk/protective Factors are represented by socioeconomic status (SES), caregiver's depression, victim of a crime and social capital variables. Each will be described as follows.

6.5.2.1. Socioeconomic Status (SES).

Economic resources are one of the most well-established contributors to human development and well-being. A family's socioeconomic status (SES) has a significant impact as to how resources are allocated to meet the needs of their children in terms of education, healthcare, and other developmental requirements that support them succeed and achieve developmental milestones. (Chen et al., 2018; Peverill et al., 2021; Poulain et al., 2020)

Although the choice between using asset-based wealth indictors and income and consumption expenditures to measure SES remains debatable, wealth indices typically do not accurately reflect the realities of poor people. For example, water or electricity, which is a key component of the wealth index, is a community-level variable, and is not relevant to determining a household's affluence. Second, ownership of certain specific items could be a matter of taste rather than financial constraints, and it may not reflect a household's living standards. (Trinh and colleagues, 2021). As a result, in this study, consumption expenditure will be used as a proxy to assess a household's socioeconomic status (SES). The combined real per capita monthly expenditure on food and non-food items available from Young Lives will be calculated to determine a household's socioeconomic status (SES).

6.5.2.2 Caregiver's depression

Caregiver's depression is measured using the SRQ-20, a 20-item self-report screening tool intended to identify general psychological distress, including suicidality. Developed by the World Health Organization, it has been validated in several international studies, yielding solid internal consistency and was effective in identifying participants with major depression, anxiety disorders, or suicidality, in China, South Africa and India (van der Westhuizen et al., 2016) The yes/no answer format, and each responses will be averaged to provide the caregiver's depression index.

Table 6 Caregiver's Depression Variables

Have headaches.	Poor digestion
Poor appetite	Trouble thinking clearly.
Bad sleep pattern	Feel unhappy.
Easily frightened?	Cry more than usual
Shaking hands	Difficulty in enjoying life.
Nervous/tense/worried	Difficulty in making decisions.
Felt couldn't go on.	unable to play.
Tired all the time?	lost interest
feel worthless person	

6.5.2.3. Loss of Parents

Children who have experienced parental divorce are more likely to develop a variety of mental health conditions, including depression, anxiety, suicidal ideation and attempt, distress, alcohol and substance use (Auersperg et al., 2019) Children who lost their parents before the age of 18 are

twice as likely to develop depression as children who did not lose their parents before the same age.(Simbi et al., 2020). A Loss of Parents index will be established to evaluate changes in household composition due to death, divorce, and incarceration of parents.

6.5.2.4. Victims of a Crime

Responses to questions whether a household was victim of a crime in the Young Lives survey will be used to assess the level of criminal activities a household faced. The response to these yes/no statements will be calculated to arrive at the crime victim index of a household.

- Destruction/theft of tools for production
- Theft of cash/crops/livestock
- Theft/destruction of housing/consumer goods
- Crime that resulted in death/disablement
- Theft/destruction (cash, crops, livestock, housing)

Table 7. Summary of Household-level Risk/protective Factors

Caregivers Depression	Victim of a crime	Death/illness of Family Member	Consumption Expenditure/capita
• Headaches • Poor appetite • Sleep badly • Easily frightened • Hands shake • Nervous, tense, or worried • Poor digestion • Trouble thinking clearly • Unhappy • Cry more than usual • Can't enjoy daily activities • Difficult to make decisions • Daily work suffers • Unable to play part in life • Lose interest in things • Feel worthless • Couldn't go on in life • Tired all the time • Easily tired	• tools • cash • crops • livestock • housing/	• Death of father • Death of mother • Death of another household member • Divorce or separation • • Imprisonment	• Expenditure on food • Non-food Expenditure • Total Monthly expenditure

6.5.3. Community-level Risk/Protective Factors

6.5.3.1. Neighborhood Safety

Neighborhoods are important settings that either provide opportunities for children to grow or pose risks that impair their developmental outcomes. Impoverished and crime ridden neighborhoods expose children and their parents to a variety of problem behaviors. Local crime data contained in the Young Lives survey will be used as a proxy to evaluate neighborhood safety. The averages of the yes/no responses to these variables will be calculated to be used as neighborhood safety score.

- Robbery
- Theft
- Prostitution
- Juvenile gangs.
- Local adult bands/ Rivalry groups.
- Illegal drugs selling in local area.
- Drug addicts in the local area.
- Alcoholism.
- Violent crime

6.5.3.2. Access to Services

The presence of child-friendly institutions such as schools, healthcare, public libraries, recreational programs, and activities influences positive children's outcomes. Anderson and colleagues (2019). The access to services index will be calculated using the averages of yes/no responses to questions about the availability of basic service infrastructure in the neighborhood, such as public space for family recreation, water and electricity services, all-weather roads, and so on.

6.4.3.3 Social Capital

The study uses the short version of the Adapted Social Capital Assessment Tool (SASCAT) to measure caregiver's social capital, which was validated Peru and Vietnam (De Silva et al., 2006a). The total of these yes/no responses to the following statements will form a household's social capital score.

- Member in a community group
- Received support from the group.
- with other community members addressed common issues
- talked with the local authority about problems in the area.
- People in the community can be trusted.
- People in the community get along.
- I feel a part of this community.
- People in this community would try to take advantage of you.

Table 8. Summary of Community-level Risk/protective Factors

Access to Services	Social Capital	Neighborhood Safety
• football (soccer) field, volleyball field, • camping place for family recreational • Movie theatre/Public place for playing films. • Religious institutions, Churches, mosques, • Telephones • Public internet cabin • Electricity • Drinkable water • Sewerage • Police station • School • healthcare facility	• Member in a community group • Received support from the group. • with other community members addressed common issues • talked with local authority about problems in the area. • People in the community can be trusted. • People in the community get along. • I feel a part of this community. • people in this community would try to take advantage of you.	• Robbery • Theft • Prostitution • Juvenile/adult gangs. • Illegal drugs sale • Drug addicts • Alcoholism. • Violent crime

6.5.4. Macro-level Risk/Protective Factors

Changes in economic and legislative areas as well as climate shocks which indirectly affected the growing child represent the macro-level risk/protective factors. These are subdivided into their respective components as shown explained below.

6.5.4.1, Climate Shock

Climate shocks caused by excessive rainfall or extreme temperatures, and drought have been identified as major risk factors influencing family income, consumption expenditure,

nutrition, and diet composition. These in turn, leads to child malnutrition, as manifested by disproportionate physical height and weight growth, as well as cognitive or language and memory development (Aguilar & Vicarelli, 2022) A Climate Shock score will be calculated by taking the average response to questions about drought, flooding, erosion, frost, pests on crops and crop failure.

6.5.4.2. Legislative Shocks

A legislative shock score will be calculated based on the yes/no responses to such events as land redistribution, resettlement or forced migration, forced contributions, eviction and invasion of property, that occurred in the community.

6.5.4.3. Economic Shocks

Economic shocks score will be calculated using the average yes/no responses to the following statements.

- Increase/decrease in input prices
- death of livestock
- loss of job/source of income
- industrial action
- contract disputes
- disbanding credit
- confiscation of assets
- disputes with family
- disputes with neighbors
- increase/decrease in food prices
- decrease in food availability.

Table 9. Summary of Macro-level Risk/protective Factors

Economic Shocks	Legislative Shocks	Climate Shock
• Increase/decrease in input prices • death of livestock • loss of job/source of income • industrial action • contract disputes • disbanding credit • confiscation of assets • disputes with family • disputes with neighbors • increase/decrease in food prices • decrease in food availability	• land redistribution • resettlement or forced migration. • restrictions on migration • forced contributions. • eviction • invasion of property	• Sock-drought • flooding • erosion • frost • pests on crops • crop failure

6.5. Dependent Variables

6.5.1 Wellbeing

In this study, wellbeing was conceptualized as an objective approach that reflects the environmental contexts in which children develop. It was constructed using child-level data that incorporates multiple domains in the sphere of health, education, social relationships, income, and employment. By considering these diverse aspects, the research aimed to avoid the limitations of traditional single-dimensional standards that tend to overlook other elements that significantly influence wellbeing. Additionally, the study acknowledged that wellbeing cannot be solely linked to earning a level of income or GDP per capita, as these indicators may not accurately represent a child's overall wellbeing and may not have an obvious relationship with their holistic development.

(UNICEF, 2007). While economic expansion can lead to improvements in some social conditions, it may also exacerbate inequality or negatively impact environmental quality. Therefore, solely relying on economic indicators as a measure of wellbeing is insufficient, as it overlooks the diverse factors that influence a child's overall quality of life. Comprehensive measures of wellbeing must consider various dimensions, including health, education, social relationships, and living conditions, to gain a holistic understanding of children's wellbeing and ensure that their needs are adequately addressed. (Prada & Sanchez-Fernandez, 2021)

Limitations of measuring child wellbeing solely through the prism of income-consumption indicators have led to the adoption of a multidimensional approach. (Gatenio Gabel & Zhang, 2017). The adoption of a multidimensional approach to measuring child wellbeing has become essential due to the limitations of relying solely on income-consumption indicators. This approach considers various dimensions and numerous variables that contribute to a child's overall wellbeing, enabling a more comprehensive understanding of their development and thriving. By incorporating factors like health, education, living standards, physical safety, and income, policymakers can develop more targeted and context-specific measures to support children in diverse situations. This shift towards measuring wellbeing using multiple dimensions reflects a more holistic and inclusive perspective, promoting a better assessment of children's needs and overall development. Moreover, it allows policymakers to develop targeted and context-specific measures to address the specific needs and challenges faced by children in different circumstances.

The adoption of a multidimensional approach to measuring child wellbeing has gained significant momentum over the years. This approach involves assessing key areas such as health, education, living standards, physical safety, and income, providing a more comprehensive

understanding of a child's overall wellbeing (Kuschminder et al., 2018). It has become increasingly common to measure wellbeing using different dimensions, reflecting the recognition that multiple factors contribute to a child's development and thriving (Maggino, 2017).

UNICEF has also developed a multidimensional child well-being index, which includes five dimensions: material well-being, health and safety, education, behaviors and risks, and housing and environment. These dimensions are measured through 26 indicators, and the score for each dimension is calculated based on the average of the scores for each indicator. The overall wellbeing index is then determined as the arithmetic mean of the scores from the five dimensions. dimensions (Prada & Sanchez-Fernandez, 2021)

In the context of Ethiopia, UNICEF has utilized multidimensional child deprivation indices, which measure three to six age-specific dimensions, including physical development (stunting), health, nutrition, education, health-related knowledge, information and participation, and access to water, sanitation, and housing (UNICEF, 2019). This multidimensional approach allows for a more comprehensive assessment of children's wellbeing, considering various aspects of their lives and experiences.

6.5.1.1 Education

The Peabody Picture of Vocabulary Test (PPVT) is widely used to measure receptive vocabulary and designed to assess a child's verbal skills and age-appropriate cognitive development. Participants are asked to select images that accurately depict the meaning of a list of words that the examiner reads. Math competency is "aimed at measuring the ability to perform basic mathematics operations with numbers and the second section designed to test problem-solving skills" (Zamand & Hyder, 2016) In general, The raw scores for the PPVT can range from 0 to 204 and there are 17 sets of 12 words in total. , and reading scores are measured to verify a

child's capacity in comprehension, ranging from simple decoding to understanding the narrative's primary themes.(Leon, 2020, p. 4) Note that comparison across years might be difficult as there has been some variation in the use of scales to measure the scores during different years of the surveys

Taking into consideration child level factors such as early literacy &numeracy abilities as well as the effects of caregiver psychological well-being, support for learning in the home, &aspirations for the child's future, Jo Boyden &colleagues analyzed the consequences of poverty, & found a strong effect on mathematical abilities &literacy from early childhood to adolescence (Boyden et al., 2019) Child labor affects children's physical, physiological, &emotional development because it reduces the amount of time available for school, impedes cognitive &intellectual development, &hazardous working conditions exposes children to various dangers. A study conducted in Ethiopia &India to investigate the dynamics of child labor &environmental shocks discovered a negative relationship between child education &child labor, as well as evidence of a negative relationship between child health (stunning &obesity) &child labor.(Koohi-Kamali & Roy, 2021) Similarly, climate shocks generated significantly increased children's overall work hours, especially boys, had "adverse effects on school attendance, with girls experiencing a more-than 70% increase in the probability of quitting schooling(Bandara et al., 2015) Crop failure due to natural disaster in Mozambique led to undernutrition increased the risk of stunting in children(Villanueva, 2022)

Table 10 Outcome Variables

Health	Education	Income/employment	Social Relationships
Anthropometric Variables BMI for age Drinking Habits 2. Consumes alcohol Has long-term health problem Has a permanent disability Permanent disability scale	Enrolled in formal school. Highest grade completed. Child's level reading/writing	Worked on a farm owned or rented by a member of your household. Worked for someone who is NOT a member of your household. Worked on your own account or business belonging to you. Worked on a farm owned or rented by you or member of your household. Worked for someone who is NOT a member of your household. Worked on your own account or business enterprise to you.	1. Times spent with friends 2.Number of friends 4. Look up to as a leader 6. Received help 7. Helped others 8. Hard to talk to other 9. Group membership

6.5.1.2. Health outcomes

Body Mass Index for Age (BFA), which measures a child's weight relative to height and adjusts for age and gender, and Height for Age (HFA) z-scores, which measure height adjusted for age and gender, are the most commonly used indicators for assessing children's growth, nutritional status, and well-being (Zamand & Hyder, 2016).

6.5.1.3. Social Relationship

The Young Lives (YL) study uses short version of the Adapted Social Capital Assessment Tool (SASCAT) to measure caregiver's social capital and aspects of child well-being (De Silva et al., 2006b). The nine-item indicator is made up of inquiries regarding the household's participation in neighborhood organizations and its receipt of financial and emotional support from such organizations and other individuals including relatives, neighbors, religious and political leaders, etc. Also included are caregivers' civic engagement activities like attending community gatherings to talk about local problems or submitting petitions to regional or national governments as well as evaluating trust and a sense of belonging in the society to measure cognitive social capital involves. Although these indicators have been validated in Peru and Vietnam, respondents faced difficulties to understand, such terms as generic groups as 'trade union', 'community association' and 'credit/funeral group' used to assess group memberships in the SASCAT. De Silva et al (2006) modified the existing instrument and validated in Peru and Vietnam, which was eventually adapted in the Young Lives Study survey to explore the association between caregiver's social capital and different aspects of child well-being.

6.6. Moderating Variables

Several sets of indicators are used to measure children's characteristics, particularly their psychosocial competencies. These scales are considered some of the most validated self-concept measures available, having been extensively validated to establish their psychometric soundness. For instance, after tweaking the scales to reflect local realities such as changing the wording of the statements from negative to positive, Young Lives found that the Cronbach's alpha coefficients for these scales was withing the acceptable range. (Ogando & Yorke, 2018)

. 6.6.1. Agency

Built on the concepts of locus of control proposed by Rotter, 1966 and self-efficacy by Bandura, 1993), The Agency Scale assesses individuals' beliefs in their own capabilities to achieve specific goals and its influence on various aspects of human functioning. This scale is designed to measure the extent to which individuals feel they have control over their actions and can influence the outcomes they desire.

6.6.1. Self-Efficacy

The General Self-Efficacy Scale (Schwarzer and Jerusalem 1995) is designed to evaluate an individual's perceived ability to cope with adversities and attain positive outcomes in life. It's a 10-item psychometric scale with responses listed on a 4-point Likert type scale from 0 (not at all true) to 3 (exactly true). The total score is calculated by adding the scores of each response to each question and ranges from 10-40, with higher scores indicating higher self-efficacy.

6.6.3. Self-esteem

Self-esteem scales is based on multifaceted and hierarchical conceptualization of self-concept by Shavelson and colleagues (Shavelson et al., 1976). It measures an individual's awareness of the self which develops as a result of his/her interactions with other people and their environments.

6.6.4. Parent and Peer Relations Scales

Similarly, Parent and Peer Relations Scales are continuous variable assessed through eight items each, measured on a Likert scale ranging from 1 = strongly disagree to 4 = strongly agree with the total score ranging from 8 (lowest parent relation) to 32 (highest parent relation).

6.6.5. Pride and Self-esteem Scale

Pride and Self-esteem Scale, trust and inclusion used in Rounds 2 and 3 are based on Rosenberg's measurement of self-esteem (ROSENBERG, 1965) which is a 10-item scale that measures self-worth by assessing both positive and negative feelings about the self. All the responses are recorded on a 4-point Likert scale format ranging from strongly agree to strongly disagree.

Table 11. Child Characteristics and Psychosocial Skills

Round 2	**Round 3**	**Round 4/5**
Trust		**Self-efficacy**
1. Most people in my neighborhood are basically honest 2. Most people in my neighborhood can be trusted 3. I believe the government does what is right for people like me 4. I feel safe when I go out of the house on my own	1. Most people in my neighborhood can be trusted 2. I feel safe when I go out of the house on my own 3. I believe the government does what is right for people like me	1. I can solve problems if I try hard enough 2. If someone opposes me, I can find the means and ways to get what I want 3. I can stick to and reach my goals 4. I am confident to efficiently deal with unexpected events 5. Thanks to my resourcefulness, I know how to handle unforeseen situations 6. I can solve most problems if I invest the necessary effort 7 Because my coping abilities, I can remain calm when facing 8. When I face a problem, I can usually find several solutions 9. If I am in trouble, I can think of a solution 10. I can handle whatever comes my way
Agency		**Self-esteem**
1. If I try hard, I can improve my situation 2. Other people make all the decisions about how I spend my time 3. I plan my for future studies and work 4. If I study hard, I will have better job 5. I have no choice about the work I do	1. If I try hard, I can improve my situation 2. Other people make all the decisions about how I spend my time 3. I plan for my future studies and work 4. If I study hard, I will have better job 5. I have choice about the work I do	1. I do lots of important things 2. In general, I like being the way I am 3. Overall, I have a lot to be proud of 4. I can do things as well as most people 5. Other people think I am a good person 6. A lot of things about me are good 7. I'm as good as most other people 8. When I do something, I do it well

Pride and self-esteem		Parents relations scale
1. I can show my friends where I live 2. I am ashamed of my clothes 3. I am ashamed of my shoes 4. I feel proud of the job my 5. I am embarrassed to lack school supplies 6. I am worried about my uniform 7. I am proud of my achievements 8. I am embarrassed by the work I do 9. The job I do makes me feel proud	I am proud of my shoes or of having shoes 2. I feel my clothing is right for 3. I am proud of my clothes 4. I am proud because I have the right books, pencils, and other equipment for school 5. I am proud that I have the correct uniform 6. I am proud of the work I do	1. My parents understand me 2. I like my parents 3. My parents like me 4. I want to bring up my kids like my parents raised me 5. I spend a lot of time with my parents 6. My parents are easy to talk to 7. I get along well with my parents 8. I have a lot of fun with my parents
Inclusion		**Peer Relationship**
7. When I am at shops/market I am treated by others with fairness and with respect 8. Adults in my neighborhood treat me worse than other children my age 9. Other children in my class respect me 10. Other pupils in my class tease me 11. My teachers treat me worse than other	1. The other children in my class treat me with respect 2. Pupils in my class never tease me at school 3. Adults in my community treat me as well as they treat other children my age	1. I have lots of friends 2. I make friends easily 3. Other kids want me to be their friend 4. I have more friends than most kids 5. I get along with other kids easily 6. I am easy to like 7. I am popular with kids of my own age 8. Most other kids like me

6.7. Ethical considerations

Young Lives Project adheres to the ethical guidelines of the University of Oxford's Department of International Development, the Commonwealth Association of Social Anthropologists, and the Save the Children Child Protection Policy. From the outset, the Project received approval from the London School of Hygiene and Tropical Medicine ethics committee. Subsequently it received approval from the College of Health Sciences of Addis Ababa University Ethiopia, the Research Ethics Committee of University of Oxford, Instituto de Investigación Nutricional of Peru, Hanoi School of Public Health Research, and the Centre for Economic and Social Studies of Hyderabad, India before collecting data in each round (Oxford Department of International Development, 2022)

Young Lives ensured all study participants are informed about the purpose of the study and subsequently obtained voluntary consent at each round of data collection from all parents and caregivers and children who have the capacity to consent (Morrow, 2013) Every effort was made to ensure that children were not pressured into participating in the study, and they were informed that their identities would be kept private(UK Research and Innovation, 2022) For this study, a project request was resubmitted to the UK Data Service which was granted on 19 March 2021.

SECTION SEVEN: RESULTS

The research findings provide insights into the developmental trajectory of Ethiopian children and the factors influencing their well-being. The study confirmed the significance of child-level protective/risk factors and household factors in predicting a child's developmental outcomes, supporting Bronfenbrenner's ecological systems theory. Additionally, child-level risk factors were found to be significant predictors of psychosocial competence, which, in turn, significantly influenced the outcomes of Ethiopian children. The Microsystem, representing the immediate environment, demonstrated a significant impact on both psychosocial competence and well-being. However, the direct effect of psychosocial competence on well-being was not statistically significant. The results suggest that PRORISK plays a more prominent role in predicting well-being compared to PSYSCIAL. Despite finding significant relationships between various variables, the hypothesis proposing PSYSCIAL as a mediator between PRORISK and OUTCOME was not supported, leading to the acceptance of the null hypothesis. The findings emphasize the complex interplay of various factors in shaping the developmental outcomes of Ethiopian children, offering valuable implications for targeted interventions and support programs aimed at improving their well-being in adverse environments. Further research could explore additional factors contributing to well-being and the long-term impacts of interventions based on the bioecological framework.

The study utilized structural equation modeling (SEM) in Mplus Version 8.9 (Linda K. Muthén & Bengt O. Muthén, 2017) to investigate whether psychosocial competence acts as a mediator between childhood risk factors and the developmental outcomes of Ethiopian children. Model fit assessments were conducted for both Round 4 and Round 5 analyses. Round 4 revealed significant influences of AGENCY, PARENTS, SELFESTEEM, and SELF-EFFICACY on psychosocial competence, and MACRO, MEZO, HOUSEHOLD, SERVICES, FOOD_GRP, and HEALTH on protective/risk factors. OUTCOME was significantly influenced by YOUALCR4, HGHQULR4, SEX_ED, WORKED, and SKILL. In Round 5, AGENCY, PRIDE, SELFESTEEM, SELF-EFFICACY, GRIT, and PEER significantly influenced psychosocial competence, while MACRO, MEZO, SERVICES, FOODGRP, HEALTH, MEALS, and ENRSCHR5 affected protective/risk factors, and YOUALCR5, HGHQULR5, SEX_ED, LANG, WORKED, MATHS, GNDROLL, and BMI influenced OUTCOME. The study revealed that psychosocial competence significantly predicted protective/risk factors, but no significant relationship was found between OUTCOME

and PSYSCIAL. The mediation analysis indicated that psychosocial competence did not mediate the relationship between protective/risk factors and the outcome variable. The SEM model for Round 4 and Round 5 are depicted in Diagram 1 and in Diagram 2.

7.1 **Model Fit Information**

The chi-square test of model fit indicated a significant difference between the observed data and the implied covariance matrix ($\chi^2 = 310.191$, df = 91, $p < .001$) of the model. The Root Mean Square Error of approximation (RMSEA) estimate was 0.055, with a 90% confidence interval ranging from 0.049 to 0.062. The probability of RMSEA being less than or equal to 0.05 was 0.090, further supporting the conclusion of a good model fit. Incremental fit indices, the Comparative Fit Index (CFI) and Tucker-Lewis Index (TLI), were 0.940 and 0.921, respectively. These values suggest a reasonably good model fit. The Standardized Root Mean Square Residual (SRMR) is reported as 0.047.

Table 12. Model Fit Information

MODEL FIT INFORMATION

Number of Free Parameters	85	
Chi-Square Test of Model Fit		
Value	310.191*	
Degrees of Freedom	91	
P-Value	0.0000	
RMSEA (Root Mean Square Error Of Approximation)		
Estimate	0.055	
90 Percent C.I.	0.049	0.062
Probability RMSEA <= .05	0.090	
CFI/TLI		
CFI	0.940	
TLI	0.921	
Chi-Square Test of Model Fit for the Baseline Model		
Value	3796.116	
Degrees of Freedom	120	
P-Value	0.0000	
SRMR (Standardized Root Mean Square Residual)		
Value	0.047	

Similarly, model fit information of Round 5 includes various fit indices used to evaluate the goodness-of-fit of the statistical model. The model included 99 free parameters, and the chi-square test of model indicated a significant difference between the observed data and the model's implied covariance matrix ($\chi^2 = 657.276$, df = 174, $p < .001$). The comparative fit index (CFI) was 0.918, and the Tucker-Lewis Index (TLI) was 0.901. The chi-square test of model fit for the baseline model yielded a value of 6075.524, with 210 degrees of freedom ($p < .001$) The standardized root mean square residual (SRMR) was 0.051.

```
Number of Free Parameters                       99

Chi-Square Test of Model Fit

          Value                             657.276*
          Degrees of Freedom                    174
          P-Value                            0.0000

RMSEA (Root Mean Square Error Of Approximation)

          Estimate                           0.060
          90 Percent C.I.                    0.055  0.065
          Probability RMSEA <= .05           0.001

CFI/TLI

          CFI                                0.918
          TLI                                0.901

Chi-Square Test of Model Fit for the Baseline Model

          Value                          6075.524
          Degrees of Freedom                  210
          P-Value                        0.0000

SRMR (Standardized Root Mean Square Residual)

          Value                              0.051

Optimum Function Value for Weighted Least-Squares Estimator

          Value                  0.34617736D+00
```

7.2. Model Results

The results of structural equation modeling (SEM) analysis to examine the mediating role of the latent variable psychosocial competence in the relationship between protective/risk factors and developmental outcomes are tabulated below.

Table 13 Model Results

	Round 4		Round 5	
PSYSCIAL BY	ESTIMATES	p-value	ESTIMATES	p-value
AGENCY	1	999	0.851	0
PARENTS	-0.528	0	-	
SESTEEM	0.286	0.006	0.796	0
SEFFCACY	0.097	0.331	0.911	0
GRIT	-	-	0.872	0
PEER	-	-	1.022	0
PRIDE	-	-	1	999
PRORISK BY	ESTIMATES	p-value	ESTIMATES	p-value
MACRO	1	999	1.165	0
MEZO	3.086	0.002	1.053	0
HOUSHOLD	3.424	0.003	1	999
SERVICES	3.214	0.003	1.276	0
FOOD_GRP	1.653	0	1.076	0
HEALTH	2.518	0.003	1.349	0
MEALS	-	-	1.193	0
ENRSCHR5	-	-	1.113	0
OUTCOME BY				
BMI	-	-	1	999
YOUALCR4	1	999	1.309	0
HGHQULR4	1.415	0	1.258	0
SEX_ED	1.468	0	1.228	0
LANG	1.403	0	-	-
WORKED	1.267	0	1.511	0
MATHS	1.152	0	-	-
SKILL	-	-	1.41	0
COMPUTER	-	-	1.436	0
PSYSCIAL ON				
PRORISK	1.815	0.005	1.053	0
OUTCOME ON				
PSYSCIAL	0.03	0.553	0.048	0.574
PRORISK	2.417	0.004	0.785	0

The results of the structural equation modeling (SEM) analysis showed the estimates and p-values for the relationships between different variables in Round 4 and Round 5. In Round 4, psychosocial competence (PSYSCIAL) was significantly influenced by indicators such as

AGENCY, PARENTS, SESTEEM, and SEFFCACY. Protective/risk factors (PRORISK) were significantly influenced by indicators such as MACRO, MEZO, HOUSHOLD, SERVICES, FOOD_GRP, and HEALTH. The outcome variable (OUTCOME) was significantly influenced by indicators like YOUALCR4, HGHQULR4, SEX_ED, WORKED, and SKILL.

In Round 5, the SEM model results confirm that AGENCY, PRIDE, ESTEEM, EFFICACY, GRIT, and PEER have significant positive effects on PSYSCIAL ($p < 0.001$). *

MACRO, MEZO, SERVICES, FOODGRP, HEALTH, MEALS, and ENRSCHR5 significantly influence PRORISK ($p < 0.001$). Similarly, YOUALCR5, HGHQULR5, SEX_ED, LANG, WORKED, MATHS, GNDROLL, and BMI have significant positive effects on OUTCOME ($p < 0.001$). Additionally, psychosocial competence significantly predicts protective/risk factors (estimate = 1.053, p = 0), while the relationship between OUTCOME and PSYSCIAL remains insignificant (estimate = 0.048, p = 0.574).

7.3. **Mediation Analysis**

The mediation effect of psychosocial competence (PSYSCIAL) on the outcome variable (OUTCOME) was examined in Round 4. The analysis considered the total effect, total indirect effect, specific indirect effect, and direct effect. The total effect showed a significant relationship between PRORISK and OUTCOME (estimate = 2.471, p = 0.004). The model also generated a total indirect effect (estimate = 0.054, p = 0.546) and a specific indirect effect through the mediator variable PSYSCIAL (estimate = 0.054, p = 0.546). Additionally, the direct effect of PRORISK on OUTCOME was found to be significant (estimate = 2.417, p = 0.004).

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Table 14. Mediation Effects (Wave 4)

TOTAL, TOTAL INDIRECT, SPECIFIC INDIRECT, AND DIRECT EFFECTS

	Estimate	S.E.	Est./S.E.	Two-Tailed P-Value
Effects from PRORISK to OUTCOME				
Total	2.471	0.847	2.918	0.004
Total indirect	0.054	0.089	0.603	0.546
Specific indirect 1				
OUTCOME				
PSYSCIAL				
PRORISK	0.054	0.089	0.603	0.546
Direct				
OUTCOME				
PRORISK	2.417	0.837	2.889	0.004

Similarly, the total, total indirect, specific indirect, and direct effects from the variable PSYSOCIAL to the variable OUTCOME for Round 5 were estimated and tabulated in the following table.

Table 15. Mediation Effects (Wave 5)

TOTAL, TOTAL INDIRECT, SPECIFIC INDIRECT, AND DIRECT EFFECTS

	Estimate	S.E.	Est./S.E.	Two-Tailed P-Value
Effects from PRORISK to OUTCOME				
Total	0.835	0.075	11.209	0.000
Total indirect	0.050	0.090	0.564	0.573
Specific indirect 1				
OUTCOME				
PSYSOCIA				
PRORISK	0.050	0.090	0.564	0.573
Direct				
OUTCOME				
PRORISK	0.785	0.126	6.245	0.000

The total effect from protective/risk variable (PRORISK to OUTCOME) was (estimate = 0.835, $p < .001$), while the total indirect effect and Specific Indirect Effect 1 (OUTCOME through PSYSOCIA) were (estimate = 0.050, $p = 0.573$), respectively.

SECTION EIGHT: DISCUSSION

8.1 Interpretation of Findings.

The research was aimed at examining whether the empirical evidence supports the bioecological framework for the developmental trajectory among Ethiopian children, and whether the collective impact of specific child characteristics (gender and psychosocial factors) on the well-being of Ethiopian children. It was hypothesized that the Microsystem, encompassing child-level protective/risk factors and household factors have a significant influence on children developmental. Additionally, it was proposed that child-level risk factors significantly predict psychosocial competence, which in turn has a significant influence on the outcomes of Ethiopian children. Furthermore, when both psychosocial competence and protective/risk factors are considered simultaneously, psychosocial competence will be a better predictor of well-being than protective/risk factors. SEM model results for Round 4 and Round 5 indicate that protective factors significantly predict, psychosocial competence such that, for every one unit increase in protective factors psychosocial competence increases by an average of 1.815 and 1.053 units respectively suggesting a positive association between higher levels of PSYSCIAL and higher levels of PRORISK. On the other hand, higher levels of PRORISK are associated with higher levels of OUTCOME whereby for every one unit increase in PRORISK, OUTCOME increases by an average of 2.417 units and 0.785 respectively during the two rounds under review. . However, the relationship between OUTCOME and PSYSCIAL are not significant, because the respective estimates have a p-value >0.05. (estimate = 0.030, p = 0.553) and (estimate = 0.048, p = 0.574) respectively.

The findings indicate that child-level protective/risk factors significantly predict psychosocial competence, and the Microsystem, consistent with Bronfenbrenner's theory, significantly predicts psychosocial competence and well-being. However, the direct effect of psychosocial competence on well-being is not significant. The results suggest that PRORISK plays a more significant role in predicting well-being compared to PSYSCIAL.

The results highlight that the direct effect of PRORISK on OUTCOME is consistently significant in both Round 4 and Round 5 analyses. Additionally, the findings demonstrate that child-level protective/risk factors play a significant role in predicting psychosocial competence.

Moreover, the Microsystem, consistent with Bronfenbrenner's bioecological theory, has a significant influence on both psychosocial competence and well-being among Ethiopian children. However, the indirect effects through the mediator variable PSYSCIAL were not statistically significant. Therefore, the hypothesis suggesting that PSYSCIAL mediates the relationship with OUTCOME is not supported, leading to the acceptance of the null hypothesis.

The results highlight that the direct effect of PRORISK on OUTCOME is consistently significant in both Round 4 and Round 5 analyses. Additionally, the findings demonstrate that child-level protective/risk factors play a significant role in predicting psychosocial competence. Moreover, the Microsystem, consistent with Bronfenbrenner's bioecological theory, has a significant influence on both psychosocial competence and well-being among Ethiopian children. However, the indirect effects through the mediator variable PSYSCIAL were not statistically significant. Therefore, the hypothesis suggesting that PSYSCIAL mediates the relationship with OUTCOME is not supported, leading to the acceptance of the null hypothesis OUTCOME is not supported, leading to the acceptance of the null hypothesis.

The flow chart of the SEM model is shown on the next page, and the actual simulation results for Round 4 and Round 5 are depicted in Figures 4 and 5 respectively.

Figure 7: Flow Chart

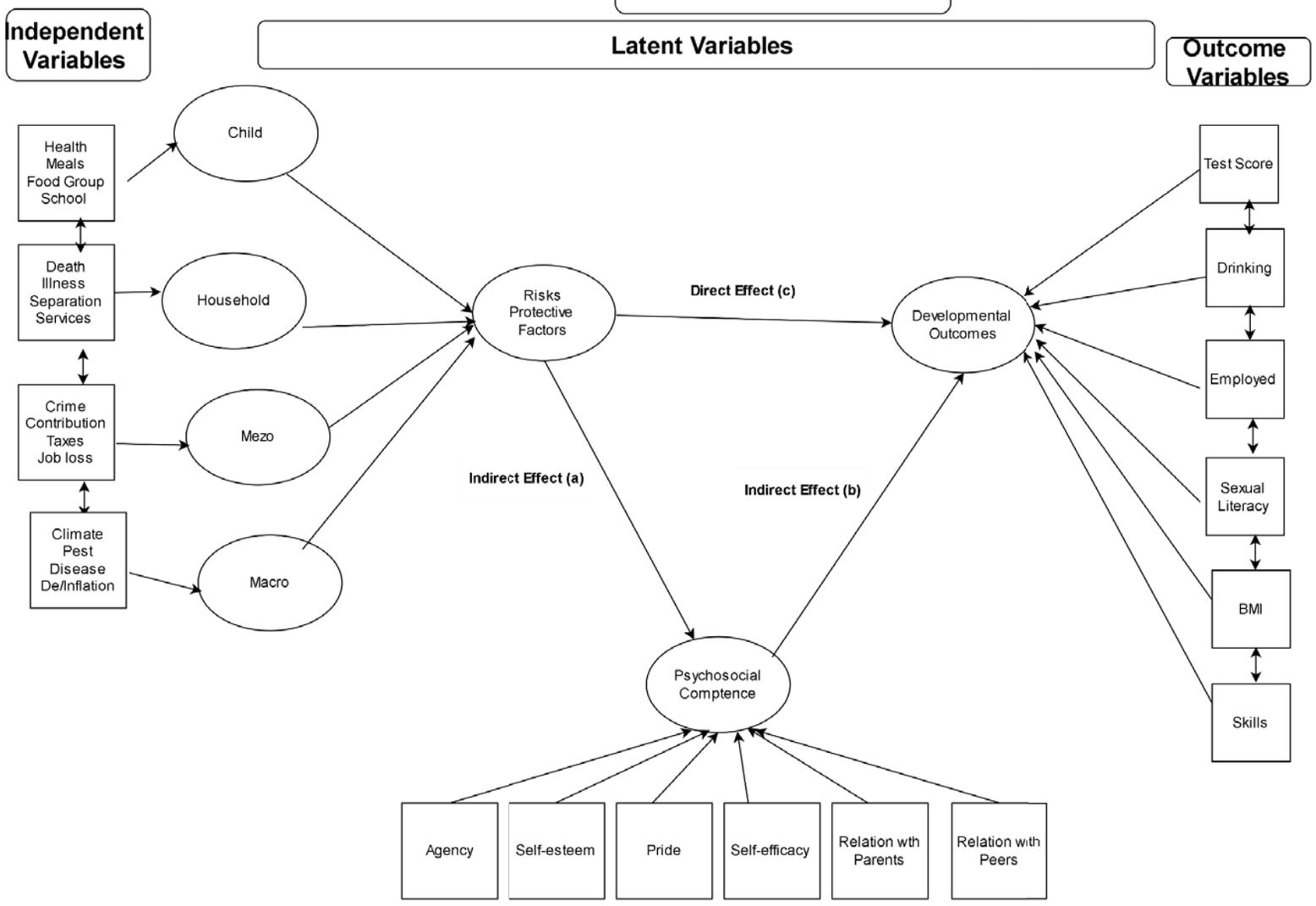


Figure 4. Structural Equation Model for Wave 4

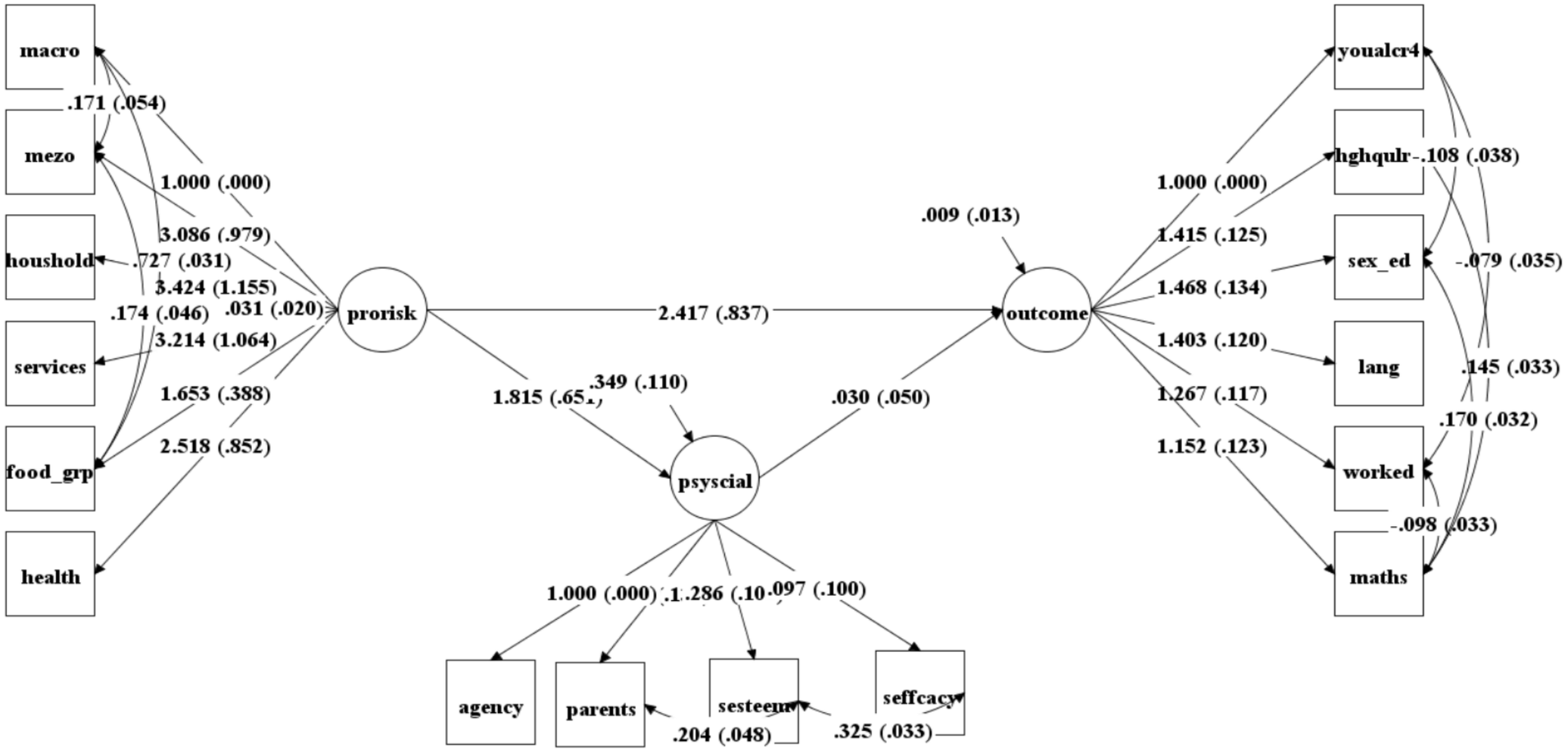
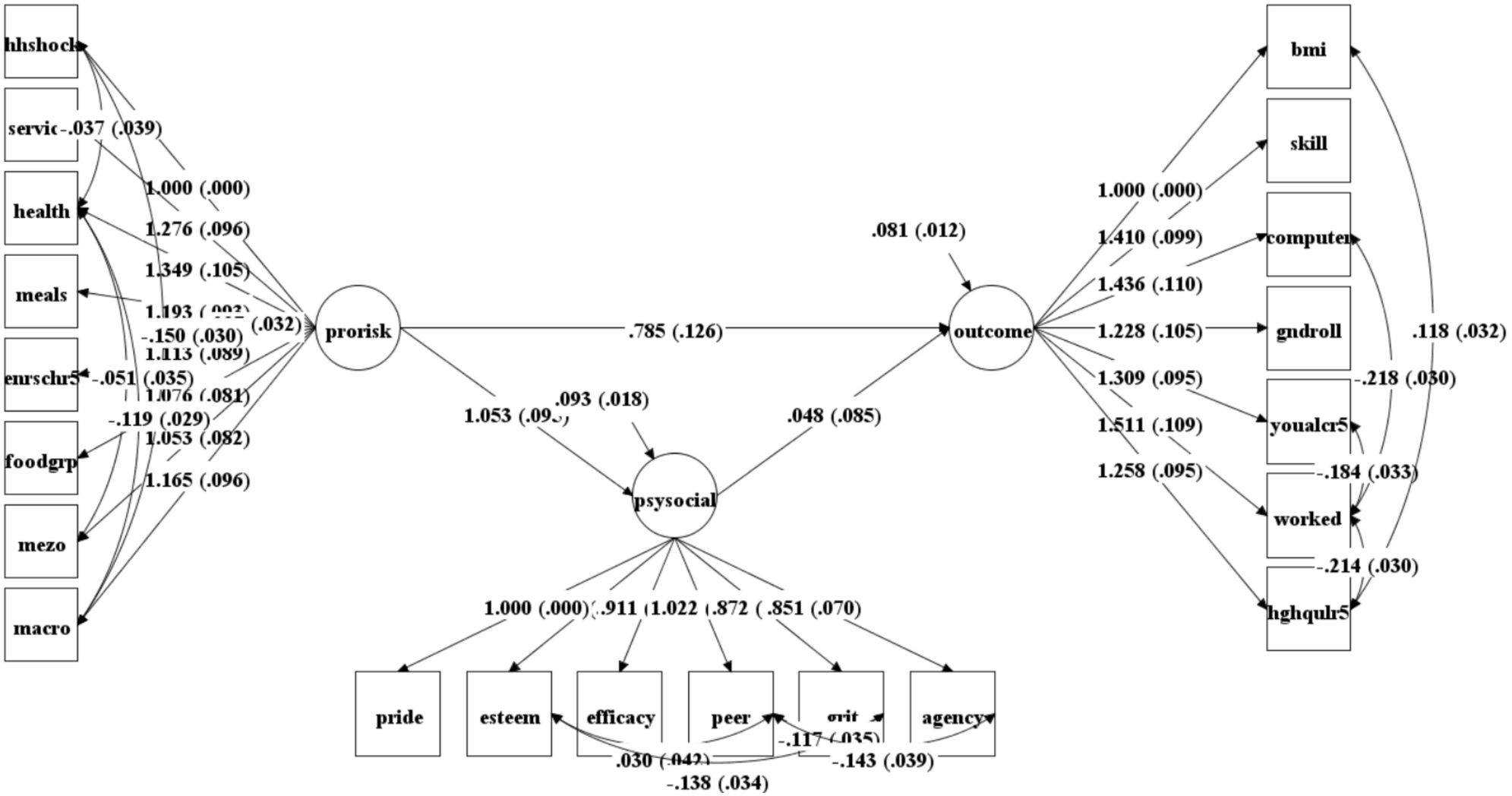


Figure 4. Structural Equation Model for Wave 5



8.2. Implications

The research highlights the significance of child-level protective/risk factors in predicting psychosocial competence among Ethiopian children. Addressing adversities and investing in child-focused interventions are crucial for positive outcomes. Additionally, the study supports Bronfenbrenner's theory, showing that the Microsystem predicts psychosocial competence and well-being. Although psychosocial competence plays a minor role in resilience, it has untapped potential for promoting positive outcomes. Interventions targeting psychosocial skills empower children to navigate challenges. A comprehensive and collaborative approach involving stakeholders is essential for effective implementation, leading to improved well-being and resilience among Ethiopian children.

Several key implications can be drawn from this research:

1. The research findings underscore the importance of recognizing the role of child-level protective/risk factors in predicting psychosocial competence among Ethiopian children. Factors such as poverty, violence, or displacement can significantly impact children's development and well-being. Therefore, addressing and mitigating these adversities, while also promoting investments in child and household-focused interventions, are essential for fostering positive outcomes and supporting children's overall well-being.
2. The study supports Bronfenbrenner's bioecological theory by demonstrating that the Microsystem, which includes immediate environments such as family and peers, significantly predicts psychosocial competence and well-being among Ethiopian children. This highlights the importance of considering the ecological context in understanding child development and designing interventions that target multiple levels of influence.

3. The findings that psychosocial competence plays a minor role in contributing to the resilience of Ethiopian children imply that there is untapped potential to harness these capabilities to effectively promote resilience and improve developmental outcomes among these children. While the influence of psychosocial competence may be limited, it still presents an opportunity for intervention and support to enhance children's overall well-being and adaptive functioning. By focusing on strengthening and developing psychosocial skills, interventions can empower Ethiopian children to navigate challenges, build resilience, and achieve positive developmental outcomes.

8.3. Recommendations

There are several potential interventions that could enhance the psychosocial competence of Ethiopian children. Some possible interventions include:

8.3.1. School-based interventions

School-based interventions, such as social-emotional learning programs, peer mentoring, and teacher training, have been shown to effectively promote the psychosocial competence of children. In the context of Ethiopian education, it is crucial for education planners to prioritize the integration of topics related to psychosocial competence into the curriculum. By incorporating these topics, students can develop essential skills and abilities that contribute to their overall well-being and success. Including psychosocial competence in the curriculum not only supports the holistic development of students but also equips them with the necessary tools to navigate various challenges they may encounter in their lives. By fostering psychosocial competence, the education system can play a significant role in promoting

resilience, emotional intelligence, interpersonal skills, and overall mental health among Ethiopian students.

By emphasizing the importance of psychosocial competence, education planners can create an educational environment that prioritizes the well-being and overall development of students. This can lead to positive outcomes, including improved academic performance, increased social-emotional skills, and enhanced personal growth. Through comprehensive teacher training programs, educators can acquire the necessary knowledge and skills to effectively incorporate psychosocial competence into their teaching practices. Additionally, creating opportunities for peer mentoring and collaboration can further enhance the psychosocial development of students. By recognizing the significance of psychosocial competence and integrating it into the curriculum, Ethiopian education planners can contribute to the overall well-being and resilience of students, preparing them for success in both their academic and personal lives.

8.3.2. Social skills training

Social skills training is a valuable intervention that aims to enhance the psychosocial competence of children by focusing on improving their interpersonal skills, communication abilities, and relationship-building capabilities. Through social skills training, children learn essential skills such as active listening, effective verbal and nonverbal communication, conflict resolution, empathy, and cooperation. These skills enable them to interact with others in a positive and respectful manner, establish and maintain healthy relationships, and navigate social situations successfully.

By participating in social skills training, children can practice and refine these skills in a supportive and structured environment. They receive guidance and feedback from trained facilitators who help them develop a repertoire of social strategies that they can apply in various contexts. Social skills training also contributes to the development of children's confidence and self-esteem. As they acquire and apply new social skills, children gain a sense of competence and self-assurance in their interactions with others. This can have a positive impact on their overall psychosocial well-being and their ability to handle social challenges. Implementing social skills training programs in educational settings, community centers, or therapeutic settings provides children with a structured and intentional approach to learning and practicing these important skills. Group-based activities, role-playing exercises, and real-life scenarios are commonly used in social skills training to simulate social situations and promote active engagement and learning.

In the context of Ethiopian children, social skills training can be particularly beneficial as it equips them with the necessary skills to navigate diverse social environments, build positive relationships, and effectively communicate their needs and feelings. This intervention can enhance their psychosocial competence and contribute to their overall well-being and resilience. Collaboration among educators, parents, and professionals is crucial for the successful implementation of social skills training programs. By incorporating social skills training into educational curricula and providing ongoing support and reinforcement, Ethiopian education systems can foster the psychosocial development of children and help them thrive in various social contexts throughout their lives.

8.3.3. Parenting programs

Parenting programs play a crucial role in promoting the psychosocial competence of children. These programs provide parents with the knowledge, skills, and support they need to develop positive parenting practices, which can have a significant impact on their children's psychosocial development. By participating in parenting programs, parents can learn effective communication strategies, positive discipline techniques, and strategies for promoting emotional regulation and social skills in their children. These skills are essential components of psychosocial competence.

Through these programs, parents can also receive support and guidance in navigating the challenges of parenting, including managing stress, fostering positive parent-child relationships, and promoting healthy child development. By improving parenting practices, parenting programs contribute to creating a nurturing and supportive home environment that enhances children's psychosocial well-being. When children grow up in an environment where their social-emotional needs are met and they receive consistent and positive parenting, they are more likely to develop strong psychosocial competence. Parenting programs can be implemented in various formats, such as group sessions, workshops, or individual coaching. They can be offered through community centers, schools, healthcare facilities, or online platforms, depending on the accessibility and preferences of the target population.

In the context of Ethiopian children, parenting programs can be particularly valuable in supporting families facing various challenges, such as poverty, displacement, or limited access to resources. By equipping parents with the necessary skills and knowledge, these programs can help break the intergenerational cycle of adversity and promote positive psychosocial development in children. Investing in parenting programs and providing accessible and culturally sensitive support

to parents is an essential strategy for promoting the psychosocial competence of Ethiopian children and ensuring their overall well-being and resilience.

These implications highlight the importance of adopting a holistic and comprehensive approach to child development, considering multiple factors and contexts that influence children's well-being. It is essential to tailor interventions and strategies to the unique needs and circumstances of Ethiopian children, considering cultural sensitivities and utilizing the strengths and resources available in their communities. Collaboration among policymakers, educators, mental health practitioners, and community organizations is vital for the successful implementation and sustainability of these interventions. By working together, stakeholders can share expertise, resources, and perspectives to create effective and culturally appropriate programs.

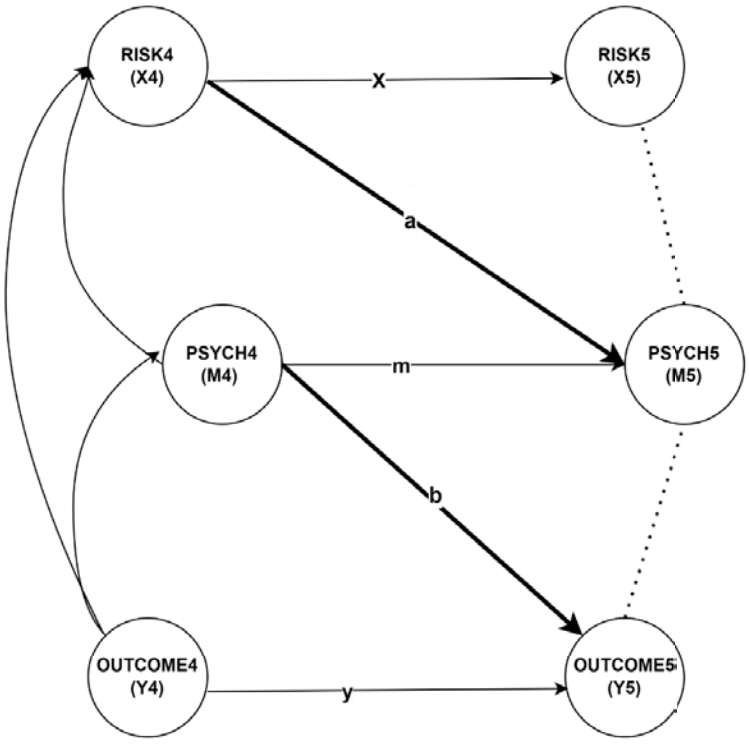
Investing in the development of psychosocial competence and resilience among Ethiopian children can have far-reaching benefits. By equipping children with essential skills and abilities, such as social skills, emotional regulation, and problem-solving, they can navigate challenges, build positive relationships, and cope effectively with adversity. Furthermore, these interventions contribute to creating a supportive and nurturing environment for children's healthy development. They help mitigate the impact of adverse circumstances and foster positive outcomes, promoting well-being and optimal growth.

Overall, by recognizing the multifaceted nature of child development and implementing comprehensive interventions, Ethiopia can empower its children to thrive, ensuring a brighter future for the nation.

8.4. Area of future research

Cross-lagged panel models (CLPMs), latent growth curve models (LGC), and Latent Difference Score Models (LDS) are commonly utilized in longitudinal mediation analysis within the structural equation modeling (SEM) framework. Moreover, given a dataset with intervals of four years, researchers may utilize a synchronous mediation model that allows for more immediate mediation effects within each wave of data. (Demirer et al., 2021) Despite their potential to assess temporal relationships between constructs and capture within-individual dynamics and between-individual differences over time, these models did not yield satisfactory results in the present study. However, with further refinement and development, these models hold promise for providing more accurate representations of developmental processes and offering more reliable insights into mediation effects in future research.

Figure 6. Proposed Structural Equation Model



Future researchers can enhance the investigation of Bronfenbrenner's theories by focusing on exploring the reciprocal relationships between an individual's proximal and distal experiences and contexts. Incorporating additional variables in longitudinal studies could provide valuable insights into how these reciprocal interactions influence developmental trajectories. By understanding the bidirectional influences between individuals and their environments, researchers can better grasp the complex dynamics that shape human development. This approach holds the potential to shed light on the mechanisms through which environmental factors and individual characteristics mutually influence each other, leading to a more comprehensive understanding of the intricate interplay between nature and nurture in the developmental process.

Conducting an individual-level disaggregated analysis, coupled with a mixed-method qualitative study, offers a comprehensive understanding of success and failure among Ethiopian children. This approach delves into unique patterns and variations that might not be evident in aggregate data. It allows researchers to identify whether children with similar initial risk levels exhibit divergent outcomes or vice versa. By triangulating quantitative and qualitative insights, the research explores lived experiences, perspectives, and contextual factors influencing outcomes. Giving voice to these experiences empowers policymakers and practitioners to address individual needs and promote overall well-being and development. This approach informs targeted interventions and policies to uplift children facing challenges and reveals deeper insights into the reasons behind observed outcomes.

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8.5 Limitation of the study

The research has several limitations.

Building composite indices is a delicate task fraught with pitfalls, ranging from issues concerning the selection of individual indicators weighting and aggregation. (Mazziotta & Pareto, 2013) The research study utilized Bronfenbrenner's child characteristics (force, demand, and resource) as a guiding framework for selecting indicator variables. However, the availability and consistency of certain variables across waves posed challenges in making direct comparisons between waves. The same issue affected the psychosocial competence variables. Moreover, the categorization of macro/mezzo variables was based on educated estimates rather than empirical evidence, acknowledging the limitations of this approach. Despite these challenges and to mitigate potential bias, the study made a concerted effort to incorporating as many variables as possible that demonstrated significant relevance to the research questions, which provided valuable insights into the complex dynamics shaping children's developmental trajectories, thus advancing our knowledge of the factors influencing their overall well-being and development.

The attempt to investigate the causal relationships and the intricate dynamics of changes in developmental trajectories over time between the two Waves under consideration did not result in an acceptable fit for the model's parameters. The complexity and challenges involved in accurately capturing the causal links and temporal changes over time within a single model highlight the need for further data construction and methodological refinements to better understand and represent the interplay of variables influencing child development.

Building a robust SEM model requires careful consideration of variable selection, measurement, and model specification. In this study, challenges were encountered in building composite indices due to issues of indicator selection and data consistency across waves.

SECTION VIII: CONTRIBUTIONS OF THE STUDY

One of the basic major premises of the research is that psychosocial skills play an important role for a child's positive developmental outcomes. Specifically, children living in poor settings but with strong self-esteem, agency and positive social relationships can successfully navigate their environment and garner resources necessary for the sustenance of their wellbeing. By designing context specific training modules, it is possible to develop the children's psychosocial skills. The study contributes to advance knowledge in social work education and research about the mechanisms for actualizing children's innate potential that fosters development outcomes in the context of their immediate family, respective communities, and macroenvironment.

Despite the fact that the bioecological theory has been a major theoretical tool in the developmental sciences, few studies have accurately operationalized Bronfenbrenner's process-person-context-time (PPCT) research model (Navarro et al., 2022). To this end, the current study, research conducted guided by Bronfenbrenner's Ecological Systems Theory, makes valuable contributions to the field of social work. It offers a comprehensive understanding of children's development within their ecological context, enabling the implementation of more effective and impactful social work practices and policies. Furthermore, the research provides deep insights into the dynamics of Ethiopian children, identifying systemic issues and proposing relevant interventions that consider their diverse needs and cultural backgrounds. The research findings can serve as a foundation for shaping policies and practices that lead to positive outcomes and empower the communities served, fostering more effective and impactful social work initiatives aimed at supporting the overall well-being of Ethiopian children and their families. As a result, the research has significant implications for the improvement of social work efforts and the well-being of Ethiopian communities.

By employing SEM-based quantitative analysis, the research contributed to comprehensively examining the complex relationships between risk factors, protective factors, psychosocial competence, and well-being among Ethiopian children. This approach allowed for a more holistic understanding of the developmental trajectories and outcomes of these children by simultaneously analyzing multiple variables and their interconnections. Using SEM, the research assesses the direct and indirect effects of risk factors on well-being, mediated by psychosocial competence, while exploring how protective factors buffer the impact of risk factors. SEM's ability to handle latent variables allows examination of unobservable constructs like psychosocial competence and well-being, capturing complex psychological processes. Additionally, SEM assesses temporal relationships, considering the study's longitudinal nature, providing a dynamic understanding of developmental processes. By employing SEM-based quantitative analysis, the research generates precise and reliable findings, enhancing the validity and generalizability of conclusions to Ethiopian children facing adversity.

Finally, by incorporating a multicultural research perspective that includes the voices of Ethiopian children, social work makes significant strides in becoming more inclusive, representative, and culturally sensitive a deeper understanding of diverse cultures and societies, ultimately promoting respect for their uniqueness and addressing the basic human needs of those often neglected in distant regions.

Appendix 1 Child Level Risk/Protective Factors

HEALTH	FOODGROUP	MEALS	OTHERS
• Do you have difficulty seeing, even if wearing glasses? • Do you have difficulty hearing, even if using a hearing aid? • Do you have difficulty walking or climbing steps? • Do you have difficulty remembering or concentrating? • Do you have difficulty with self-dressing or washing?	• Any cheese, yogurt, milk, or milk products? • Any dark, green, leafy vegetables cassava, bean kale, spinach • Any eggs? • Any food after the main evening meal • Any food before a morning meal • Any food between midday and evening meals • Any food between morning and midday meals • Any foods made from legumes such as beans, peas, lentils, or nuts? • Any foods made with oil, fat, or butter? • Any fresh or dried fish or shellfish? • * Any injera, spaghetti, or foods made from teff, millet, sorghum, maize • Any liver, kidney, heart, or other organ meats? • Any other fruits (citrus fruit, bananas, cactus)?	• A midday meal • A morning meal (breakfast) • An evening meal • Any food after the main evening meal • Any food before a morning meal • Any food between midday and evening meals • Any food between morning and midday meals	Enrolled in school?

	• Any other meat (beef, pork, goat, lamb, chicken)? • Any other vegetables (onions, cabbage, tomatoes)? • Any potatoes, yams, taro, cassava, kocho/enset or starch foods • Any pumpkin, carrots, squash, red or orange sweet potatoes? • Any ripe mangoes, ripe papayas? • Any spices (black pepper, salt), condiments, tea or coffee? • Any sugar, honey, sweets, sugary sweet drinks?		

Appendix 2. Household Mezo/Macro Variables

HOUSEHOLD	MEZO/MACRO

• Death of YL CHILD's father
• Death of YL CHILD's mother
• Death of another person in the household
• Illness of YL CHILD's father
• Illness of YL CHILD's mother
• Illness of other household member
• Divorce, separation, or abandonment
• Birth/new household member
• Child's school enrolment
• Other, Specify
• Illness of non-household member
 	
• Access to Services
  o access to electricity
  o access to improved sanitation
  o access to improved drinking water
	MEZO
	• Theft or destruction (e.g., cash, crops
	• Forced contributions or arbitrary tax.
	• Job loss/source of income/family enterprise
	• Disputes with neighbors/village member
	• Fire or collapse of building.
	• Increase in the price of food that I buy.
	MACRO
	• Drought
	• Too much rain or flood
	• Erosion, Cracks, or landslide
	• Frosts or hailstorm
	• Pests or diseases that affected crops.
	• Crops failed.
	• Large increase in input prices
	• Large decrease in output prices
	• Pests or diseases that lead to storage loss.
	• Pests or diseases that affected livestock

Appendix 3. Psychosocial Variables

Pride

- I am proud of my clothes.
- I am proud of my shoes or of having shoes.
- I am proud of the work I have to do.
- Overall, I have a lot to be proud of
- I feel my clothing is right for all occasions.

Agency

- I have no choice about the work I do - I must do this job.
- If I try hard, I can improve my situation in life.
- I like to make plans for my future studies and work.
- If I study hard at school, I will be rewarded by a better job in

Self-esteem

- If someone opposes me, I can find the means to get what I want.
- If I am in trouble, I can usually think of a solution.
- I am confident that I can deal efficiently with the unexpected.
- I can always manage to solve difficult problems.
- It is easy for me to stick to my aims and accomplish my goals.
- I can remain calm when facing difficulties.
- I can usually handle whatever comes my way.
- Thanks to my resourcefulness, I know how to handle unforeseen si
- I can solve most problems if I invest the necessary effort.

Self-efficacy

- I make friends easily.
- I'm as good as most other people.
- Overall, I have a lot to be proud of.
- I can do things as well as most people.
- Other people think I am a good person.
- A lot of things about me are good.
- I do lots of important things.
- When I do something, I do it well.
- I am easy to like.
- In general, I like being the way I am.

Relations with peer

- I am popular with kids of my own age.
- Most other kids like me
- Other kids want me to be their friend.
- I have more friends than most other kids.
- I have lots of friends.
- I get along with other kids easily.

Grit

- I am a hard worker.
- I am diligent.
- I can be obsessed with a project for a short time.
- I finish whatever I begin.
- I have difficulty maintaining my focus on projects.
- I often set a goal but later choose to pursue a different one.
- New ideas and projects sometimes distract me from previous ones.
- Setbacks don't discourage me.

Appendix 4. Outcome Variables

Computer	**Gender Roll**
• I can create something new from existing online images and music. • I can easily find the best keywords to use for online search. • I find it easy to find a website I visited before. • I know how to bold, italicize, or underline text. • I know how to change the margins (for example using Word). • I know how to complete online forms. • I know how to connect to a Wi-Fi network. • I know how to create a folder on a digital device. • I know how to create a presentation (for example using PowerPoint • I know how to delete a file. • I know how to insert a table in a document (for example using Wo • I know how to move a file from one folder to another. • I know how to open downloaded files. • I know how to retrieve a deleted file from the recycle bin. • I know how to use a spreadsheet to plot a graph (for example usi • I know how to use the undo and redo. • I know where to click to go to a different webpage. • I know which apps or software are safe to download.	• Boys are better leaders than girls. • Girls should be more concerned with becoming good wives and mothers. • Girls should have the same freedoms as boys* • If both spouses have jobs, the husband should do a share of the • It is all right for a girl to ask a boy out on a date. • It is all right for a girl to want to play rough sports. • It is more important for boys than girls to do well in school. • More encouragement be given to sons than daughters. • On a date, the boy should be expected to pay all expenses. • On average, girls are as smart as boys. • Swearing is worse for a girl than for a boy. • The father should have greater authority than the mother. **Worked** • Worked on a farm owned or rented by a member of your household. • Worked for someone who is NOT a member of your household. • Worked on your own account or business belonging to you or someone. • Worked on a farm owned or rented by you or member of your household. • Worked for someone who is NOT a member of your household. • Worked on your own account or business enterprise to you or someone. • When you drink alcohol, how much do you usually drink per day?

Automotive Skills • Can you say you are skilled in driving the following: • Can you say you are skilled in driving the following: Heavy duty vehicles. • Can you say you are skilled in driving the following: Motorcycle? • Can you say you are skilled in driving the following: Three-wheel? • Can you say you are skilled in driving the following: Tractor? • Can you say you are skilled in driving the following: Truck/bus?	**OTHERS** • Highest qualification • BMI • Alcohol use

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