Blanca Estela Barcelata Eguiarte
Paloma Suárez Brito *Editors*

Child and Adolescent Development in Risky Adverse Contexts

A Latin American Perspective

Springer

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Editors
Blanca Estela Barcelata Eguiarte
Grad. Prog. in Psychology
National Autonomous University of Mexico
Mexico City, Mexico

Paloma Suárez Brito
Department of Psychology
National Autonomous University of Mexico
Mexico City, Mexico

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Preface

This book has been carefully prepared with the intention of presenting, from a systemic perspective, an overview of children and adolescents growing up in adverse and at-risk contexts in Latin America, as well as showing a forward-looking vision for the study of the main problems that emerge in these contexts. Childhood and adolescence are critical periods of the life cycle and lay the foundation for later stages of human development. It is well known that, in Latin America, family environment plays a central role in the development of children and adolescents, considering structure and family processes as protective factors for child development, as well as variables capable of buffering and moderating the developmental outcomes across biological, psychological, and social domains.

On the other hand, and unfortunately, multiple variables have been described representing risk factors for children and adolescents developing in the southern Americas. Examples of these risk factors include extrinsic variables such as living in conditions of vulnerability and poverty (low socioeconomic level, marginalization), as well as intrinsic factors such as coping styles, emotion regulation, and psychosocial processes, including mental disorders. However, resilience research has shown that children and adolescents are able to show a successful performance in spite of serious threats to their development.

The chapters that constitute this body of work are divided into two sections that guide the reader to identify, in the first part, recent research on child development, and a second part that reflects important developmental findings at the adolescent stage. Research from both sections describes particular perspectives for the study of children and adolescents in disadvantaged situations, and social, political, and public health implications of their research are discussed.

We highlight the perseverance of the authors of each chapter who, for several years, have addressed the study of children and adolescent development in at-risk and adverse environments, contributing to understanding of the developmental and adaptation processes, offering resources to health professionals focused on healthy child and adolescent development in Latin America.

Mexico City, Mexico

Blanca Estela Barcelata Eguiarte
Paloma Suárez Brito

Acknowledgments

We would like to thank to all the authors of the book chapters, for sharing their research findings, professional experiences, and points of view. This book results from collaborative work among colleagues of diverse disciplines from some Latin American countries working under the large "umbrella" of developmental science, focusing on understanding and promoting the adaptation and well-being of children and adolescents living in adverse contexts. Thanks to the effort and commitment of all and each one of the authors over time, who kindly agreed to contribute to this volume written in a short time in the middle of a pandemic.

Thanks to María Elena Márquez and her colleagues for collaborating once again on a joint project, to Christian Peñaloza and colleagues; especially thanks to Alejandra Auza for encouraging us to take up the challenge of showing our work, to Maira Querejeta and her collaborators for enthusiastically joining this editorial project, to Paloma Suárez and Elda Alicia Alva for their contribution based on systematic research, to Alicia Oiberman and Aurora Lucero for sharing the product of their years of work, to Yanet Quijada for her committed integration into the team, to Ivonne and colleagues for giving us the opportunity to meet children from various adverse contexts, to Marina Rezende and André Vilela for their engagement in this publishing project, and to Carmen Manzo for sharing her experience with children in institutional care in one of the most crime-ridden states of Mexico.

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We are grateful to all of them for their invaluable contributions, without which this book would not have been possible.

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About the Editors

Blanca Estela Barcelata Eguiarte She is a Full Professor of Psychology at the National University Autonomous of Mexico (UNAM), at the Faculty of High Studies Zaragoza (FES-Z), and in the Postgraduate Program of Master and Doctorate in Psychology at FES-Z and the Faculty of Psychology. She received a Bachelor of Psychology, and a Master's degree in Clinical Psychology, as well as a PhD degree in Psychology and Health, from the Faculty of Psychology (UNAM). She has various postgraduate studies, for instance, at the National Institute of Psychiatry and the National Institute of Nutrition in Mexico City (i.e., Stress Management Applied to Health Disorders), and she was certified in Rational Emotive Therapy by the Albert Ellis Institute in New York. She is a member of the National System of Researchers (SNI) at the federal government agency, the National Council of Science and Technology (CONACYT-Mexico). She is also leading the line of research "Adolescence, health and family" in the Research Division (FES Zaragoza, UNAM), several embedded studies funded by the Support Program for Research and Technological Innovation Projects (PAPIIT-UNAM). She is founder of the Adolescent and Family Care Program at the University Clinic at FES Zaragoza, aiming to provide psychological intervention to adolescents and families from the metropolitan sub-urban area of Mexico City. For this work she has twice been awarded the Gustavo Baz Prada prize by the UNAM. Her research interests include studying processes related to adaptation and resilience in vulnerable adolescents and families in at-risk contexts and adverse situations by working with community and clinical samples and designing educational and clinical intervention. She is co-author of various psychological tests and editor of books about adolescence and resilience with Manual Modern Publisher. She has been a visitor professor at Universities, such as the Catholic University of Asuncion, the University of Granada, the Pontifical Xavierian University. She has been a member of the Mexican Society of Psychology, the Mexican Association of Family Therapy, the Mexican Association of Suicidology, the Interamerican Society of Psychology, the International Association of Applied Psychology, and the Stress, Trauma, Anxiety, and Resiliency Society for many years.

Paloma Suárez Brito She is a psychologist at the National Autonomous University of Mexico (UNAM, CU), an experienced researcher with a vast knowledge of human development and social and health sciences. She received a Bachelor's degree in Psychology and a PhD in Experimental Psychology from the Faculty of Psychology, UNAM, as well as postdoctoral studies in Educational Psychology from the same University. She currently collaborates on various research projects in Mexico and the USA on infant psychology and the prevention of mental disorders at the Baby Lab at the Faculty of Psychology, UNAM, the Children's Psychiatric Hospital "Juan N. Navarro," and the National Institute of Psychiatry "Ramón de la Fuente Muñiz" in Mexico City; and at the Bryn Mawr College in Pennsylvania, USA, where she has performed Research Associate activities since 2019. Her research examines child development, language acquisition, and attitudes toward mental health in parents and children, with special emphasis on typical/atypical population comparisons. Her area of expertise encompasses the study of typical development, but she is particularly interested in investigating the evolution of mental disorders in childhood and adolescence, such as depression and anxiety, suicidal behavior, and Autistic Spectrum Disorder. Owing to her academic training, Dr. Suárez is familiar with the design and implementation of funded projects, in which she has carried out activities such as goal setting, scheduling, and budgeting, but mostly, she has been involved in advising undergraduate and graduate students on their thesis projects in Mexico and Chile, presentations at conferences in Mexico, USA, Cuba, and Spain, drafts of specialized articles for publication, and statistical/methodological counseling. From 2017 to 2019 she owned the Level C distinction granted by the National System of Researchers (SNI) in Mexico, is currently Full-Time Professor at the Latin American University (ULA), member of the Society for Research in Child Development (SRCD) and is especially committed to the dissemination of scientific knowledge regarding Spanish-speaking children and adolescents developing in typical as well as in vulnerable and at-risk contexts.

Contributors

Alejandra Auza General Hospital "Dr. Manuel Gea González", Mexico City, Mexico

Autonomous Metropolitan University, Mexico City, Mexico

Blanca Estela Barcelata Eguiarte Faculty of High Studies Zaragoza and Faculty of Psychology, National University Autonomous of Mexico, Mexico City, Mexico

Marina Rezende Bazon Faculty of Philosophy, Sciences and Letters, University of São Paulo, Sao Paulo, Brazil

Paloma Suárez Brito Faculty of Psychology, National Autonomous University of Mexico, Mexico City, Mexico

Elda Alicia Alva Canto Faculty of Psychology, National Autonomous University of Mexico, Mexico City, Mexico

Maria del Carmen Manzo Chávez Posgraduate Studies Division, Faculty of Psychology, Universidad Michoacana de San Nicolás de Hidalgo [Michoacan University of San Nicolas of Hidalgo], Morelia, Michoacan, Mexico

María Justina Romanazzi Colombo Center for the Study of Child Nutrition and Development (CEREN), Scientific Research Commission, Province of Buenos Aires, Buenos Aires, Argentina

Maira Querejeta Echegoyen Center for the Study of Child Nutrition and Development (CEREN), Scientific Research Commission, Buenos Aires, Argentina

Universidad Nacional de La Plata, La Plata, Argentina

Sergio González Escobar Centro Universitario Atlacomulco, Universidad Autónoma del Estado de México, Toluca, State of Mexico, Mexico

Norma Ivonne González-Arratia López-Fuentes Facultad de Ciencias de la Conducta, Universidad Autónoma del Estado de México, Toluca, State of Mexico, Mexico

Ana Laguens Harnan Center for the Study of Child Nutrition and Development (CEREN), Scientific Research Commission, Buenos Aires, Argentina

André Vilela Komatsu Department of Sociology, Faculty of Philosophy, Languages and Human Sciences, Center for the Study of Violence (NEV-USP), University of São Paulo, Sao Paulo, Brazil

Aurora Graciela Lucero School of Psychology, University of Buenos Aires, Buenos Aires, Argentina

María Elena Márquez-Caraveo Research Division, Children's Psychiatric Hospital "Dr. Juan N. Navarro", Mexico City, Mexico

Ana Olivia Ruíz Martínez Centro Universitario Zumpango, Universidad Autónoma del Estado de México, Toluca, State of Mexico, Mexico

Nitiella Martínez-Ponce Research Division, Children's Psychiatric Hospital "Dr. Juan N. Navarro", Mexico City, Mexico

Hortensia Moreno-Macías Social Sciences and Humanities Division, Autonomous Metropolitan University-Iztapalapa, Mexico City, Mexico

Martha Adelina Torres Muñoz Facultad de Ciencias de la Conducta, Universidad Autónoma del Estado de México, Toluca, State of Mexico, Mexico

Chiharu Murata Biological and Health Sciences Division, Autonomous Metropolitan University-Xochimilco, Mexico City, Mexico

Department of Research Methodology, National Institute of Pediatrics, Mexico City, Mexico

Autonomous Metropolitan University, Mexico City, Mexico

Research Division at National Institute of Pediatrics, Mexico City, Mexico

Alicia Juana Oiberman Interdisciplinary Center for Research on Experimental and Mathematical Psychology (Centro de Investigaciones en Psicología Matemática y Experimental, CIIPME), National Scientific and Technical Research Council (Consejo Nacional de Investigaciones Científicas y Técnicas, CONICET), Buenos Aires, Argentina

Christian Peñaloza Department of Speech Therapy, University of Chile, Metropolitan Region, Santiago, Chile

Verónica Pérez-Barrón Research Division, Children's Psychiatric Hospital "Dr. Juan N. Navarro", Mexico City, Mexico

Yanet Quijada Facultad de Psicología, Universidad San Sebastián, Concepción, Chile

Martha Zanabria-Salcedo Social Sciences and Humanities Division, Autonomous Metropolitan University-Xochimilco, Mexico City, Mexico

Chapter 1
An Ecological-Systemic Framework: An Overview of Child and Adolescent Development in Adverse Contexts

Blanca Estela Barcelata Eguiarte

Introduction

Children and adolescents all around the world and in Latin America represent almost half of the population (PAHO, 2021; WHO, 2021). According to the National Population Council (CONAPO, 2015), in Mexico, adolescents embody the broad part of the population pyramid. Although children and adolescents are considered a healthy group, they are considered an at-risk group regarding mental health. They are two of the most critical cycle life stages characterized by neuropsychological processes that are developing linked to a set of changes that occur simultaneously (e.g., biological, psychological, social) moving to the subsequent stage of development. Therefore, research into development during childhood and adolescence can be better understood assuming an integral and systemic perspective of human development, explaining some of the personal and family proximal factors, and also including other kinds of distal factors such as poverty, health, and education policies, that could represent a serious risk to the well-being and healthy development of children and adolescents in Latin America.

Regarding the trajectories of children and adolescents in adverse situations, poverty is an important issue owing to its association with multiple adversities and the negative consequences in the short, medium, or long term in their development and mental health. Recently, the president of the World Bank declared that poverty has suffered the worst increase in generations (World Bank, 2021a). Global extreme poverty is expected to rise in 2021 for the first time in over 20 years owing to the disruption of the COVID-19 pandemic (World Bank, 2021a). The global extreme

B. E. Barcelata Eguiarte (✉)
Faculty of High Studies Zaragoza and Faculty of Psychology, National University Autonomous of Mexico, Mexico City, Mexico
e-mail: bareg7@comunidad.unam.mx

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poverty rate fell to 9.2% in 2017, from 10.1% in 2015. In 2018, four out of five people below the international poverty line lived in rural areas. Half of the poor in the world are children and adolescents. About 70% of the global poor aged 15 and over have no schooling or only have some basic education. A recent study by Santos and Villatoro (2018) showed that out of 17 countries in Latin America (e.g., Nicaragua, Mexico, Chile, Costa Rica, Brazil), 3 present poverty incidence that exceeds 70%, in 3 additional countries the percentage is around 60%, whereas in 5 countries (including Mexico and Colombia) the poverty incidence was between 30% and 40%, followed by Brazil and Costa Rica. Moreover, the economic crisis due to the COVID-19 pandemic has increased unemployment rates and economic pressure, and the number of people living under poverty conditions, and probably will increase more in the next few years. An estimated 356 million children and adolescents live in extreme poverty (UNICEF, 2021). The urban settings may be the most affected as well as LMICs such as those of Latin America (World Bank, 2021b).

The science of development, from a multidisciplinary and multisystemic perspective, is focusing on the development of children and adolescents across contexts and cultures (Lerner et al., 2012; Masten, 2021; Ungar, 2021). Poverty implies a risk context, with a powerful influence on physical and socio-psychological development. Early childhood, particularly the first years, is the basis for the long-term cognitive, socio-emotional, and physical development, which can be affected by many risky environmental and social factors, such as stress, socioeconomic status, and the relationship with caregivers and parents, which play a central role in childhood and adolescence (Shaffer et al., 2013; Steele et al., 2016). There is evidence of the negative impact of poverty and economic pressures on brain development when stressful experiences occur in early childhood and adolescence (Buckley et al., 2019; Cicchetti & Handley, 2019). However, neural plasticity studies highlight that children's and adolescents' developmental trajectories can be changed, showing normal development and resilience, depending on the level of risk or adversity (Cicchetti, 2015; Haft & Hoeft, 2017). For example, children can recover from the lack of stimulation in their early years, presenting a positive development and outcome, despite the early adverse experiences with mothers with early stimulation programs (Masten, 2021; Masten et al., 2013). Therefore, based on research, the ecological systemic perspective represents a positive and optimistic conceptual framework regarding the development of children and adolescents growing up in adverse conditions, providing theoretical and methodological models based on scientific evidence with the practical implication for the designing of intervention in multiple settings.

In short, "Developmental Science" can be considered to be a wide cross-disciplinary field aimed at understanding the developmental trajectories and outcomes across the life span. Based on the general systems theory and the ecological model assumptions (Bronfenbrenner, 1979; Von Bertalanffy, 1972), the developmental ecological systemic perspectives (e.g., Cicchetti, 2010; Masten, 2014; Sameroff, 2010), suppose that developmental trajectories and outcomes of children and adolescents result from the interplay of individual ecological systems. It is important to analyze findings in the field of child and adolescent development

research in Latin America from these perspectives as many children and adolescents are growing up in adverse situations generated by the macro system such as poverty and marginalization. For example, social exclusion, lack of financial resources, and environmental conditions to ensure a healthy mental and physical development for the whole family, are frequently associated with parental neglect or uncaring maternal support, negative parenting behaviors/attitudes, and negative peers in communities. However, developmental trajectories and outcomes can be normal depending on how the risk, promotive, and protective factors are combined, across different ecological systems; thus, resilience outcomes can be expected as reported throughout this book. Moreover, early diagnoses, as well preventive and selective intervention based on evidence at the family, school, and community level, can be designed, promoting, and enhancing competencies in children, adolescents, and families to face adverse situations.

Poverty and Adverse Contexts: Conceptual Definition and Implication for Development

From the field of social and health sciences, poverty has been given many connotations depending on the framework in which it is circumscribed. The World Health Organization (WHO, 2021) defines poverty as a lack of material, social, and educational resources that lead to economic deficiencies that limit people's development. Poverty has been examined from different points of view, for instance, socioeconomic models take up poverty in terms of income, including three broad perspectives of poverty. From a monetary perspective, "have" and the "income," a person is poor only when his or her income level is below the defined poverty line. Thus, poverty implies having less than a reference group, which could also be equated with inequality (Sameti et al., 2012; Smeeding, 2016). This kind of definition refers to at least two concepts of poverty, absolute and relative poverty, the last one reflecting the perception of needs, which starts from the changing nature of needs. To resolve the issue of "relativity" it is important to relate the sufficiency of resources to the average increase or decrease in real income and to consider a psychological approach for a better understanding as poverty cannot be determined by evaluating only average income (Office of Disease Prevention and Health Promotion [ODPHP], 2021). Poverty can also be defined in reference to capabilities, to denote the absence of certain basic competencies to "do well," or the lack of the opportunity to function in an acceptable way with regard to a social parameter, which implies a significant risk to mental health and well-being (UNICEF, 2021). Likewise, poverty implies social exclusion, as deprivation of material resources to access and cover human needs, leading to a lack of opportunities to participate in social activities related to economic and others form of exclusion; thus, unemployment is frequently an indicator of poverty in social and developmental sciences (Elliott, 2016). All these perspectives can be useful when poverty is measured objectively; however, given the multidimensionality of poverty, a subjective measure of poverty is needed

(Smeeding, 2016). Therefore, in the field of human development, "subjective" criteria are frequently used to assess and understand the relationship between poverty and mental health (Urban et al., 2009).

From the developmental science, poverty has been recognized as a broad and multifactorial variable that goes through all ecological systems, from macro-system to micro-system and vice versa; thus, it encompasses many dimensions of children's and adolescents' lives (Duncan et al., 2017). The consequences of being poor or having economic strain depend on the degree or kind of "poverty." There is evidence that any kind of poverty has a negative effect on the development of children and adolescents, given the low opportunities for full, healthy development, for example, for housing, food, education, health, and recreation (Golberstein et al., 2019). Poverty and quality of life are related because of their consequences for child and adolescent development, in the short and medium term, as well as in adulthood, as poverty can be intergenerational, creating a process that Birch called the "poverty cycle" that perpetuates the conditions of poverty associated with negative and maladaptive developmental trajectories, which in turn involve neglected parenting, domestic violence, abuse, among other problems (Cicchetti & Ng, 2014; Garmezy, 1993). On the other hand, subjective perception of poverty plays a central role in mental health and well-being, as needs may be universal and timeless, but the satisfiers (goods and services), are established according to a sociocultural reference group, even though they can be changeable from one source to another and person to person (Wadsworth et al., 2016). Hence, assessing poverty from a subjective perception, involves the appraisal of a person, a family, or a group, regarding a situation, a group, or community standard; thus, this approach seems to be more useful when studying the relationship of poverty to child, adolescent, and family development.

Therefore, poverty as a multidimensional factor can be defined by the objective condition of living, as well as the subjective appraisal that adolescents and families do. Hence, developmental research into poverty and disadvantaged people can be identified based on a set of sociodemographic markers (e.g., employment, occupation, and schooling of parents, as well as quality of housing) associated with socioeconomic status (SES), which is frequently used as an integrative measure of diverse indicators (e.g., parent schooling and occupation) for assessing poverty conditions. Besides, an subjective appraisal of economic strain by children, adolescents, and families can be measured (Conger & Conger, 2002; Perzow et al., 2018).

Studying Adversities in Children and Adolescent Development: Why the Ecological-Systemic Perspective?

In the last few decades, a large body of findings on the child and adolescent development field identified as "Developmental Science" (Lerner et al., 2013; Masten, 2014) has grown, integrating micro-paradigms and theories from a multidisciplinary

perspective, most of them systemic, to understand the developmental trajectories of children and adolescents. Based on the general systems theory (Von Bertalanffy, 1972) and an ecological perspective of human development (Bronfenbrenner, 1979), relational developmental systems represent a "macro-paradigm" and a broad conceptual and methodological framework engages in a comprehensive understanding of child and adolescent development under normative and non-normative circumstances, for instance, the developmental psychopathology perspective (e.g., Cicchetti, 2013; Masten & Barnes, 2018), positive youth development (PYD) (e.g., Lerner et al., 2015), the transactional-ecological perspective (e.g., Felner & DeVries, 2013; Sameroff, 2010), or the developmental organizational model (Flynn et al., 2014). From these perspectives, childhood and adolescence are critical and complex periods of the life cycle characterized by plasticity in a dynamic and interactive process, person, and context. The adolescents must grow in a complex scenario ranging from micro- to macrosystem development; thus, the adolescent outcomes imply interaction across multiple ecological systems (Cicchetti, 2010). The adaptive, or maladaptive, outcomes of children and adolescents emerge from a complex transactional process among multiple ecological levels, from proximal (personal, family, school) to distal systems (neighborhood, socio-political, and cultural contexts), with the family system playing a mediating and moderating role, between more inclusive systems and child and adolescent development (Bornstein & Cheah, 2006; Bronfenbrenner, 1979; Golberstein et al., 2019). In the field of the science of development, the developmental psychopathology model has been defined as the study of the origins and course of individual patterns of maladaptive and normal behavior (Sroufe, 2013). The developmental perspective has been defined as a macro paradigm that involves multidisciplinary conceptual and methodological research aimed at understanding adaptive-maladaptive development resulting from the interplay among the biological, psychological, and contextual systems on the domain of risk and resilience (e.g., Cicchetti, 2013; Masten, 2021; Sameroff, 2013).

Recently, Masten (2021) defined resilience as the capacity of any system, whether relating to an individual or to the community, to adapt efficiently to any situation that threatens its functioning, viability, or development; moreover, it is not necessary to have extraordinary resources in thriving adversity. The current research comprises diverse theoretical and methodological approaches within a broad developmental systemic general perspective, aimed at understanding the mechanism and processes involved in child and adolescent development in diverse risk settings. We can identify the utility of the transactional-ecological approach (Felner & DeVries, 2013) to understand development in social-risky neighborhoods; revisiting Bowlby's attachment theory (Bowlby, 1958; Salinas et al., 2018), to explain the consequences of early deprivation in childhood for the subsequent developmental periods; the PYD approach (Lerner et al., 2015), which highlights the fact that adolescents can promote their development even in adverse situations. Additionally, the ecological developmental model in maltreated children explains the consequences in the short and long term in pathway development (Michl-Petzing et al., 2019), explaining the interplay of genes and environmental factors in child and adolescent offenders. On the other hand, various multifactorial models from the

ecological systemic approach offer theories concerning youth delinquency (Le Blanc, 2017; Moffitt, 2018). For these approaches, childhood and adolescence can be considered as sensitive periods of development, as stress in childhood and adolescence is linked to subsequent psychological disorders in adulthood; however, the idea that adolescence is a stormy period is debated (Lerner et al., 2012). Therefore, a more positive perspective considers that adolescence is a period of resources and challenges in an interaction scenario influencing health and competent behavior in daily life.

Moreover, the ecological-systemic perspective proposes that trajectories and developmental outcomes of children and adolescents involve transactional processes of genetic, biological, psychological, and sociological factors, within an organizational framework from macro- to microsystems. Poverty is a factor situated in the macro-structure, implying a significant risk to children's and adolescents' well-being (Conger & Conger, 2002; Duncan et al., 2017; Garmezy, 1991; Rutter, 1985), as it is related to adverse events, and situations in a cumulative and cascade risk process, becoming a chronic stressful event affecting their daily lives (Evans & De France, 2021; Golberstein et al., 2019; Rutter, 2006). Thus, proximal and distal ecological systems influence the mental health of children and adolescents through the family system; however, they are capable of responding positively to challenges and adapting positively to critical or adverse situations, i.e., being resilient.

Therefore, poverty can be considered a condition related to both macrosystems and microsystems, given that the large number of negative environmental events involved in many adverse situations impact negatively on the physical and emotional health of children and adolescents (WHO, 2021). However, the growing findings in developmental science demonstrate that many children and adolescents display positive adaptation, despite the risk. Likewise, most of the resilience literature shows that adaptation and resilience are processes (Cicchetti, 2013; Lerner et al., 2013; Masten, 2014) and cannot be considered linear processes. Operational definitions of resilience may involve input, processes, and salient outcomes; thus, most explanatory models of resilience assume that development involves an interplay among diverse, proximal, and distal risk and protective factors across ecological systems (e.g., Ungar, 2021). Some approaches may be more useful in understanding adaptation and resilience in children and adolescents from risky and adverse settings. A compensation model of resilience based on a comprehensive protective-risk model supposes that adolescent outcome resulting from the interplay of individual and contextual risk, promotive, and protective factors (e.g., individual vulnerabilities, level of risk, cumulative stressful events), as some protective factors can play a buffering role from a high-risk setting, moderating the negative effect of risk in the adolescent development (Santiago et al., 2017; Wadsworth et al., 2013). On the other hand, the stress inoculation approach based on what Meichenbaum proposed (Meichenbaum, 1985) has been useful in understanding how some children and adolescents become resilient to adverse situations. It suggests that a few moderate exposures to stressful situations might improve resistance to stress in adolescents and families as it works as a "vaccine," enhancing the resilient potential to display adaptive responses to intense stressful experiences, preparing adolescents to

learn functional strategies to cope with other similar experiences (Felton et al., 2017; Malhi et al., 2019; Rutter, 2013). In addition, the model of cumulative risk cascade (Evans & De France, 2021; Rutter, 2012) supposes that cumulative adverse situations, frequently involving settings of poverty, increases vulnerability, affecting developmental trajectories and adolescent outcomes.

Hence, resilience and adaptation are complex and changing processes over time, contexts, and across diverse domains of development. The concept of adaptation, also, generates controversy, although it can be considered as a fundamental premise to understand the trajectories of positive versus negative development or psychopathology, under ordinary circumstances according to salient developmental tasks (Masten et al., 2008; Masten & Obradović, 2006). Adaptive behavior reflects competence in achieving personal independence and meeting social demands such as academic adjustment and performance (O'Dougherty et al., 2013). Thus, adaptation can also be considered as the ability to function in daily life, which is an important marker of adjustment. For example, in adolescents in out-of-home placements, living skills become an important focus of attention as they transition to independent living. Nevertheless, recent analyses of resilience and positive development and adaptive or positive outcomes from the development science (e.g., Lerner et al., 2019) support the idea that resilience as well as adaptation, working in a continuum resulting from the interplay between individual resources and the context relations in the face of different levels of risk and adversity, considering that risk is also in a continuum from a low to a high level. Resilience is also considered as an outcome of the interplay of risk-promotive and -protective factors across ecological systems; therefore, diverse models of resilience (Masten, 2021; Ungar, 2021) can be the basis for understanding why children and adolescents may display different pathways and outcomes in adverse settings.

Child and adolescent development are a complex process that may present continuities or discontinuities depending on the interaction of both proximal and distal risk and protective factors. Thus, proximal risk factors are directly experienced by the individual, whereas distal factors are risks derived from the context, but mediated through more factors in the proximal systems than family. For example, a proximal risk exposure could be the negative influence of the peer group, whereas a distal risk could be a disadvantage neighborhood given the interplay of individual and context (O'Dougherty et al., 2013).

Pathways to positive adaptive versus maladaptive functioning can be influenced by a complex matrix of the individual's biological and psychological organization, past and current experiences, active choices, social context, timing of adverse events, and experiences (Michl-Petzing et al., 2019). Researchers are looking for the consequences of exposure of early adverse experiences in the pathways of trajectories of child and adolescent development through longitudinal investigation (Cicchetti & Ng, 2014; Sroufe, 2013; Wadsworth et al., 2013); however, cross-sectional research has also been carried out using multivariate analyses, to understand the mechanisms underlying whether the adaptive or maladaptive developmental outcomes of children and adolescents. Likewise, the importance of knowing the situations that imply a significant risk for adaptive development is also emphasized.

In this sense, stressful life experiences constitute a potential threat to the well-being and healthy development of children and adolescents, as they are exposed to stressful and adverse experiences that may include acute traumatic events, chronic stress, social risk, accumulation of stressful life events, malnutrition, which can be considered to include both normative developmental experiences as well as non-normative and stressful events impacting the neurodevelopment, with consequences in multiple biopsychological domains (e.g., executive function, language) (Buckley et al., 2019; Wagner et al., 2016).

What Are We Doing in Latin America and Looking Forward?

The lives of many Latin American children and adolescents are full of adverse and stressful experiences owing to economic inequalities and socioeconomic transformations that have caused the living conditions of the families in which they develop to deteriorate. These macro-structured processes manifest in what is called poverty, which is increasing in Latin America. Based on a developmental perspective, several researchers have taken up specific models and theories on child and adolescent development, most of them from a resilience perspective, trying to understand the consequences of poverty for the development of children and adolescents, owing to the importance of early experiences in infancy for the subsequent childhood and adolescent developmental trajectories and mental health outcomes. Most of the findings in Latin American studies with children, adolescents, and families under risky and adverse conditions, presented throughout this book, show that the family system is an important factor for developmental processes in children and adolescents. They demonstrate that many children and adolescents present resilience, showing good functioning, adaptation, transformation, and recovery from early adverse experiences, as have been reported in the literature, such as neglectful caregivers (Raviv & Wadsworth, 2010), negative parenting (Bornstein & Cheah, 2006; Michl-Petzing et al., 2019), and chronic stresses such as economic strain (Perzow et al., 2018; Wadsworth et al., 2016).

From birth, many developmental processes are related, involving the interplay of individual and context; thus, the relationship between child-caregiver and environment is an important source of stimulation for a child's neuropsychological development, including motor skills, cognitive skills, and socioemotional development. For example, socioemotional processes play a main role in human development, mainly in infancy, early to mid-childhood, and even in adolescence (Thompson, 2014). However, relatively few studies are carried out in Latin America compared with other, high-income countries. Thus, the first part of this book focuses on conceptual and methodological issues of child development from birth to childhood, presenting research findings regarding children and caregivers from different contexts of Latin American countries such as Argentina, Brazil, Chile, and Mexico. For instance, regarding children's development of a background in poverty, Márquez and colleagues in Chap. 2 present findings of a longitudinal investigation carried out

with infants and their caregivers of low SES, aiming to explore the effects of parenting in early infancy. They confirm the association between negative parenting with child impairment development in diverse developmental domains such as language or motor skills, by comparing diverse pathways over time and across different groups of children. However, their results suggest that, considering the Mexican family culture, early intervention, guiding the mother's practices with their children at home, can promote better child development before the second year of life. These results confirm that:

1. Living in poverty condition is a significant risk factor for the early development of children as the previous investigation indicates (Duncan et al., 2017; Masten et al., 2013).
2. The significant influence of caregivers in early stimulation, during at least the first 2 years of a child's life, as research has highlighted (e.g., Bornstein, 2016; Masten et al., 2013; Sroufe, 2013).

These findings are related to those that Peñaloza, Auza, and Murata (see Chap. 3) present regarding children's linguistic development in a risky environment. They use a screening procedure to identify children with Developmental Language Disorder (DLD), working with their parents as informants, throughout a screening process to detect monolingual Spanish-speaking children in diverse settings (Chilean and Mexican contexts) with this problem. They collected information on parental risk perception about their children's linguistic development as parental perception can be a predictor factor in the process of early identification, as well early intervention in children with a language disorder. From a preventive perspective, the need for early detection is emphasized as persistent language problems can exist in infancy and at later developmental stages, which may result in academic failure and school difficulties.

Given the central importance of evaluation and intervention in early developmental stages, in Chap. 4, Querejeta and colleagues, present a review of the main findings in Latin America, specifically Argentina, regarding infant development, including an overview of conceptual and methodological approaches to the study of child development. Moreover, the authors present the most important measures in assessing diverse developmental domains (e.g., emotional, cognitive, motor skills), and some of the findings of their own line of research with children from vulnerable backgrounds, including normal and risk samples of the metropolitan area of Buenos Aires. Finally, considerations about the limitations and challenges of research with this kind of population are also presented.

Based on the similar children's developmental background perspective, the research of Suárez and Alva presented in this book (see Chap. 5) regarding the importance of the evaluation and early detection of childhood developmental difficulties, is consistent with those findings of Peñaloza and colleagues. Thus, they have developed measures for the early detection of specific language difficulties or gaps in small children using the reports of their caregivers, examining the SES influence on linguistic skills. They present an instrument for parents from diverse SES, considering the level of education and SES, including caregivers of low SES. They

corroborate the effect of mothers on the language skills of their infants, and they also present previous research about the development of language skills and other domains in Mexican infants. Suárez and Alva also highlight the importance of caregivers on infant development underlying the convenience of having suitable measures according to cultural contexts, and specific demographic variables of caregivers according to other researchers (e.g., Bornstein & Cheah, 2006).

Many developmental processes are related to each other or are closely interconnected; of them, emotional development plays a central role in the mental health of children and adolescents. Considering that the developmental process takes place in a relational context, early relational experiences between infants and caregivers involve attachment relationships, which in turn are linked to socioemotional development at subsequent stages of life and adaptive-maladaptive pathways and developmental outcomes (Eisenberg et al., 2001; Thompson, 2014). Thus, based on a developmental perspective, in Chap. 6, Oiberman and Lucero present an intervention in early infancy based on developmental bonding and relational theories (Ainsworth, 1969), such as object-relations and bonding theories (e.g., Klein, Spitz, and Winnicott), and Bowlby's theory attachment (Bowlby, 1958), whose purpose is to recover, re-establish, and strengthen the infant-mother bonds by stimulating attachment relations, and in turn, promoting the integral development of children. The authors developed the program "Early Bonding Reanimation" aimed at stimulating bonding in infants with early deprivation of attachment relationships, through the active participation of their caregivers, most of them in a vulnerable situation.

On the other hand, the second part of this book focuses on analyzing the interplay of individual, family, and extra-family influences (e.g., school, neighborhood, and external mentors) in adolescent development. From a developmental ecological-systemic perspective of resilience, research in Latin America, including Mexico, has focused on the interaction of proximal and distal factors, trying to identify individual and contextual factors, involving both adaptive and maladaptive outcomes. Thus, issues linked to personality features, stress-coping processes, self-regulatory processes, such as emotion regulation, as well as family factors, such as attachment, parenting, and social support, have been addressed. For example, in Chap. 7, regarding adolescent development of adverse family and community context settings, Barcelata presents some data derived from studies conducted by her and colleagues with clinical, school, and community samples of poverty and socially risky settings, confirming some of the main assumptions and findings in the resilience field (Felner & DeVries, 2013; Lerner et al., 2012; Masten, 2021; Ungar, 2021) that highlight the fact that development and adolescent outcomes depend on the interplay of multiple individual and contextual factors such as family. Coping and emotion regulation were the main mediating factors between stressful events and adolescent outcomes. Likewise, based on family systemic approaches and family stress models (Bornstein, 2016; Conger & Conger, 2002; Olson & Lavee, 2013; Wadsworth et al., 2016), family issues are addressed. Most of the studies show that, for example, positive parenting, high family cohesion, and perceived family support were linked to mental health, whereas negative parenting and family difficulties were related to negative outcomes such as pregnancy, internalizing, and externalizing problems.

According to the WHO (2019), suicide is one of the most prevalent causes of death in adolescents between 15 and 19 years globally. Around 90% of suicides are committed by adolescents living in LMICs (WHO, 2021). Therefore, the relevance of individual-environment interaction in the emergence of such complex and multifactorial mental health problems as adolescent suicidal behavior is demonstrated by the inquiry of Quijada from an ecological-systemic approach (see Chap. 8). A psychosocial model of suicide is presented in her chapter, which was tested using structural equation modeling with a Chilean population. The data indicate that risk trajectories originate from the interplay of several contextual variables, with psychosocial and clinical mediating factors, that lead to suicidal behavior. Findings show that school-based prevention programs are needed in Chile, as well as in other Latin American countries, where this problem has increased and to which few evidence-based mental health actions are applied.

In Chap. 9, González-Arratia and colleagues show findings with children and adolescents under different circumstances of psychosocial risk (e.g., children under street conditions, children and adolescents during confinement by COVID-19, neglected children). They observed different profiles comparing features related to resilience. From a positive psychology and resilience approach, they observed psychological resources such as optimism, a sense of humor, active coping, and social support when comparing resilient and nonresilient children and adolescents, which are consistent with previous data (e.g., Wadsworth et al., 2013; Zimmer-Gembeck & Skinner, 2016).

According to the developmental-organizational perspective (Cicchetti & Ng, 2014; Flynn et al., 2014), childhood maltreatment carries an accumulation of vulnerabilities in multiple domains during development. There is evidence that poverty promotes an environment of violence and maltreatment associated with antisocial and juvenile delinquency (e.g., Moffitt, 2018), one of the most increasing and highly prevalent problems in many Latin American countries such as Colombia, Brazil, and México. From an ecological perspective of adolescent development, Rezende-Bazon and Komatsu take up the Personal and Social Control Theory (PSCT) proposed by Le Blanc (2017) to carry out research with Brazilian adolescent offenders (see Chap. 10). The inquiry has been conducted from a multisystemic and multifactorial methodological approach using multivariate statistical procedures to understand the persistent trajectories of criminal conduct. Using cluster analyses, they identified patterns of criminal conduct that were significantly different from each other, linked to diverse family, school, and social problems. Their findings support assumptions of the PSCT (e.g., Le Blanc, 2017) and contribute to the understanding of antisocial and criminal behavior in a broad framework that goes beyond psychopathology, with implications for both clinical and social intervention. Likewise, their research highlights the need to reinforce preventive actions aimed at detecting features such as callous-unemotional traits in the early stages of childhood that are accentuated in adolescence, which has been linked to antisocial behavior and delinquency, but few studies have been conducted in Latin America, despite a high prevalence in school samples in marginalized neighborhoods, for example, in Mexico City (e.g., Barcelata & Rivera, 2018).

Finally, institutionalized children and adolescent mental health is an issue addressed in this book. For decades, the mental health of children in residential and foster care has been an issue addressed in investigation into the developmental perspective (e.g., Barber et al., 2004). In Mexico, as well as in other Latin American and Caribbean L-MICs, institutional care is a social problem associated with poverty (Kirk et al., 2017), as well as a risk for children and adolescent mental health and well-being, as, in turn, it is linked to neglected and abusive families, family economic hardships, parental mental illness, etc. Based on their own experiences and a review of the literature, Manzo presents an analysis of the consequences of residential care on multiple developmental domains in Mexican institutionalized children and early adolescents (see Chap. 11). She highlights the effects in the short, middle, and long term of residential care in the developmental trajectories and mental health of children and early adolescents. For instance, behavioral and emotional problems in children and adolescents may be worse; however, mental health care practitioners and therapists can help to improve the well-being of children and adolescents in foster care, providing close relationships with peers, receiving social support, and establishing good relationships with a significant person.

Final Considerations and Future Challenges

Research in Latin America represents many methodological challenges for investigators, addressing child, adolescent, and family developmental issues in poverty and disadvantaged backgrounds. As we noted, research from developmental science has grown, mostly based on the ecological-systemic perspective. Although there are significant methodological advances and new procedures and measures are presented with practical implications, research with stronger designs and statistical tools is needed. These advances undoubtedly contribute to the guiding of research in Latin America; however, considering the contextual differences of each country, one of the most important challenges is to generate more models ad hoc that explain the wide variability of developmental adolescent trajectories and outcomes according to the micro-contexts in which children and adolescents live. Given the cultural differences across Latin American countries, the meaning of adaptation, good functioning, and resilience could be diverse. Research into resilience should be addressed; beliefs of the family system, the meaning of rituals, the sense of belonging are a few examples. Therefore, the recommendation of considering resilience from a multicultural perspective (e.g., Masten, 2021; Ungar, 2021) seems to be useful for carrying out investigations in Latin America. Also, proposals that adaptation and resilience are processes changeable over time and places, given the interplay of individual and environment, should be followed by researchers (Cicchetti, 2013; Lerner, 2018; Masten, 2014), as they seem to be suitable for the understanding of children and adolescents' development in the Latin American context.

Moreover, given the multiple contexts of risk, multiple forms of successful adaptation, in diverse domains, as well as levels of resilience, will also be expected. Although many contexts cannot be changed as they are determined by complex macro-structural processes (e.g., economic, policy, etc.), the future for children and adolescents looks promising, even in adverse contexts. Research shows that childhood and adolescence are stages of human development characterized by neural plasticity at multiple levels, which allows structures to be reorganized, reorienting developmental trajectories that may lead to successful adaptation to different contexts.

In order to support the positive development of children and adolescents, as well as enhance adaptive and resilient outcomes, researchers' tasks should be:

1. To focus on diversity, even in a context of poverty.
2. To consider that a multidisciplinary perspective is needed.
3. To search for a more comprehensive approach addressing, risk, promotive, and protective factors when researching development in adverse contexts.
4. To address a multilevel and multi-informant approach.
5. To focus more on the resources of children, adolescents, and families.
6. To design intervention from a preventive perspective, given the low resources for supporting community programs.
7. To design universal and suitable selective intervention according to the particular context where children, adolescents, and families lives.
8. To use mixed methods, integrating qualitative and quantitative research for a comprehensive understanding of the adaptation of children, adolescents, and families, and resilience in multiple adverse contexts.

To summarize, poverty is a multidimensional risk to the development of children and adolescents. The ecological-systemic approach or relational development systems theory represent suitable frameworks for leading multisystemic research with vulnerable and disadvantaged populations. Researchers in Latin America should make synergy from a multidisciplinary work, gathering methodological and financial resources, to conduct multisystemic and multilevel research involving biological issues throughout childhood and adolescence, that the literature has shown to have an important influence on the development of children and adolescents. Perhaps most important is to let the "data speak," which means, listen to children, adolescents, and families, as they are plentiful resources, but most of the time they have trouble identifying them, and/or using them in a productive way. Research should display bridges between health and educational institutions, and lead mental health multilevel actions considering the variability of adversities, the multiple issues, and diverse cultural contexts across Latin America.

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Part I
An Overview of Children's Development Issues

Chapter 2
The Effects of Parenting Practices on Early Childhood Development in a Context of Poverty in Mexico City

María Elena Márquez-Caraveo, Martha Zanabria-Salcedo, Hortensia Moreno-Macías, Chiharu Murata, Verónica Pérez-Barrón, and Nitiella Martínez-Ponce

Early Childhood Development, Parenting, and Poverty in Latin America

The first 3 years of life are a rapid, impressive, and fundamental period filled with the acquisition of diverse competencies and primary social relationships. This time, called Early Childhood Development (ECD) by the Center on the Developing Child (n.d.) lays the foundations for future adaptation. Hence, the pertinence of associating it with the fourth goal of the 2030 United Nations Agenda for Sustainable Development Goals (SDGs): "leaving no one behind," which seeks to ensure equitable quality education and lifelong opportunities for all children (United Nations Development Programme, 2021).

M. E. Márquez-Caraveo (✉) · V. Pérez-Barrón · N. Martínez-Ponce
Research Division, Children's Psychiatric Hospital "Dr. Juan N. Navarro", Mexico City, Mexico

M. Zanabria-Salcedo
Social Sciences and Humanities Division, Autonomous Metropolitan University-Xochimilco, Mexico City, Mexico
e-mail: zanabria@correo.xoc.uam.mx

H. Moreno-Macías
Social Sciences and Humanities Division, Autonomous Metropolitan University-Iztapalapa, Mexico City, Mexico
e-mail: hmm@xanum.uam.mx

C. Murata
Biological and Health Sciences Division, Autonomous Metropolitan University-Xochimilco, Mexico City, Mexico

Department of Research Methodology, National Institute of Pediatrics, Mexico City, Mexico

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However, how will Latin American countries and governments reach this goal when more than 40% of their children grow and develop in contexts of poverty? Addressing this issue from a developmental science perspective, the purpose of this chapter is to analyze the association between poverty and ECD outcomes, with an emphasis on the identification of parenting practices. Thus, we gather international, Latin American, and our own research data, to provide evidence for the importance of different parenting practices in the context of poor families and their effects on ECD. We remain convinced that parenting practices mediate socioeconomic status (SES) and ECD outcomes. Therefore, we find it crucial to collect reliable data on the quality of parenting practices in order to design culturally sensitive programs that best serve the needs of poor children and their families. Finally, this field of knowledge seeks to invite researchers in the field to disseminate their findings and work in partnership with other local and regional research teams.

Framework and International State of the Art

Developmental science has evolved from a dichotomous perspective (e.g., biogenic versus psychogenic explanations) to an "interdisciplinary approach to the life span that recognizes the scientific value of integrating multiple perspectives—biological, psychological, sociocultural, historical, into a synthetic, holistic, complex, coactional system" (Overton & Molenaar, 2015, p. 2). That is, for researchers development has become a stochastic phenomenon resulting from an interactive process between the individual and its context (Overton & Molenaar, 2015). Following the same direction, ECD, has been conceptualized as the foundation of "educational achievement, economic productivity, responsible citizenship, lifelong health, strong communities and successful parenting of the next generation" (Center on the Developing Child, n.d.). Through this framework, it is possible to provide an understanding of cumulative risk models in the study of ECD in low- and middle-income countries (LMICs), where children are exposed to a more intense and greater variety of risk factors than children from high-income countries (HICs) (Wachs et al., 2016). A salient contextual risk for growing LMICs is poverty (UNICEF, 2017). In fact, out of 250 million poor children, 70 million are located in Latin America, where more than 40% of children face such a disadvantage (Minujin et al., 2017). The negative impact of poverty on developmental outcomes during the first stage of life is well known (Tran et al., 2016). Nevertheless, it has been recognized in research that parenting practices constitute a mechanism that can serve to mediate the relationship between poverty and child outcomes (Jeong et al., 2017) and that positive parenting practices, for example, contribute to mitigating the low achievement of children living in low-income families (Sun et al., 2018). As already mentioned, low stimulation environments are characteristic of poor settings. However, it is notable that high variability has been reported in stimulation trajectories in low-income households. In the USA, for example, six home early learning environments (consistently high, consistently low, and with varying patterns of change)

were identified in a large low-income sample. These environments were related to pre-kindergarten vocabulary and emergent literacy skills. The authors also suggested that by the age of 15 months children experienced the full range of learning environments that spanned from low rise/decline to high/stable learning environment trajectories, highlighting the importance of timing in the development of specific literacy skills (Rodríguez et al., 2011).

Although evidence for the association between stimulating environments and developmental outcomes in LMICs (where most children under 5 years of age live) has increased in the past decades, most of the evidence has focused on pre-school populations. Therefore, longitudinal research based on direct observations of stimulation is necessary to understand the association between poverty and early developmental outcomes via the mediation of parenting quality (Jeong et al., 2017). In this regard, Frongillo et al.'s (2014) review of measures and indicators assessing the impact of interventions promoting ECD in LMICs, suggests that the HOME Inventory (Bradley et al., 2001) and the MCIS (Multiple Indicator Cluster Survey) (UNICEF, 2012) are useful indicators of family care.

The construct of parenting practices in this chapter incorporates Bornstein's (2006) multidimensional and specific taxonomy of parenting cognitions and practices. These include nurturing, physical, social, didactic, verbal, and material categories or domains. The nurture category relates to the fulfillment of biological, physical, and health requirements, the physical domain explains physical growth (gross and fine motor skills), which allows children to approach and reach out to their physical world. The social domain includes all the visual, verbal, affective, and physical parental behaviors imbued with emotional closeness when displaying loving interchanges with their children. The didactic category refers to how parents stimulate their children to engage and interact with their surroundings and understand the external world. The language or verbal domain reports the aforementioned domains, enhancing all developmental domains. Finally, the material category explains the provision of an organized home and local environment, together with the interaction with inanimate objects and the level of ambient stimulation (Bornstein, 2006). As proposed in Frongillo et al.'s review (2014), we selected the HOME Inventory sub-scales as the best tool to measure these parenting practices in our own context.

Although recent data in LMICs have shown that it is common to find positive parenting practices that create learning environments, less than 10% of parental caregiving in families in these countries display cognitive stimulation such as naming, counting, reading, or drawing (Bornstein & Putnick, 2016) being ECD poorly assessed in an-depth analysis. Recently, Sun et al. (2018) confirmed the protective effects of parental engagement in early learning activities with children at home in the relationship between SES and child development in six Asian countries. ECD research in Latin America has been predominantly limited to the assessment of intervention programs, as in the case in Chile (Lozoff et al., 2010), Colombia (Andrew et al., 2018; Attanasio et al., 2014), Bolivia (Behrman et al., 2004), Jamaica (Walker et al., 2010), or Nicaragua (Macours et al., 2008). A national transversal study in Argentina evaluated developmental milestones and documented the strong

association between maternal education and language and cognitive domains of development, especially during later ages (Lejarraga et al., 2002). On the other hand, and within a transversal design, in rural Paraguay, Austin et al. (2006) identified a developmental decline at the second year of life that was attributed to inadequate parent–child socialization (measured by total HOME). Moreover, their findings suggest the difference of sub-scale scores according to neighborhoods; specifically, the responsivity sub-scale of the HOME Inventory was strongly associated with cognitive outcomes. In Honduras, Urke et al. (2018) suggested that maternal stimulation was positively associated with ECD in rural and the poorest wealth quintiles. More recently, and within a longitudinal perspective, Prado et al. (2017) added further understanding of the previous 44 risk factors associated with ECD through their study of four African cohorts. One of their findings was that SES and language (more than motor) development were consistently mediated more by caregiving practices than by maternal or child biomedical conditions. In Mexico, Knauer et al. (2019) recently documented the relevance of parenting quality (responsiveness, warmth, and stimulating experiences) in the prediction of developmental outcomes in rural communities in Mexico. The authors identified that responsiveness and warmth (not stimulating experiences) in infancy (4–18 months) predicted cognitive development in pre-kindergarten (3–5 years). These findings confirm that low parenting quality could have adverse effects on ECD.

Available research suggests the importance of documenting parenting practices trajectories in the context of families living in poverty in Mexico City. Longitudinal designs are needed in order to assess patterns of change and processes involved in children's outcomes as much as in caregiving practices. Our research design started assessments from birth to provide sound methodology for evaluating the starting point of differences in developmental outcomes. Additionally, by choosing a low-risk cohort, our purpose was to minimize the contribution of biological factors in the explanation of developmental outcomes and to assess the influence of psychosocial variables. We assume that poor families show variability in their caregiving practices; therefore, we expect to identify those parenting practices most strongly associated with better children's outcomes. By doing so, we expect to provide evidence to support the design of targeted interventions for those families characterized by low levels of stimulating parenting and caregiving. The following is a summary of the most important evidence.

Findings and Contributions of Our Research

Our research line had its starting point in the field of developmental pediatrics owing to the influence of the longitudinal studies of Cravioto et al. (1998). A salient contribution of this research group was the evaluation of the validity and reliability of indicators and measurements regarding developmental status, microenvironment, and macroenvironment variables associated with malnutrition, in the context of rural Mexico. For example, one of these measures included the 62-item version of

the HOME Inventory. Under the Mexican rural context of these studies, this version added 17 items to the widely used 45-item version; demonstrating that despite the differences in structure, both versions showed the ability to distinguish the qualities of home environments. The interpretation criteria for both versions, particularly in the low SES Mexican population was a contribution of Rivera et al. (2010) to the field.

The "Modulación Ambiental del Desarrollo Infantil" (MADI) Program, was a pioneering research project developed in the context of a low-resource setting (Children's Psychiatric Hospital in Mexico City). Under a longitudinal design, this project laid the groundwork for a new research department and promoted the training and consolidation of a research team (Márquez-Caraveo et al., 2017). Convinced that a longitudinal effort (almost unattainable in the Latin American context) was needed to understand developmental processes, the MADI Program started a project in 1991 by recruiting 91 healthy children and their mothers from 2 public hospitals for low-income populations. These were then followed up through home visits until the age of 18.

The contribution of MADI's findings is vast, including the identification of typologies of parenting practices most relevant to developmental outcomes, as well as the role of birth order as a variable that informs their explanation. Additionally, sensory-motor development from birth to age 2 years and its association with SES was also an innovative analysis for Latin American literature. Finally, chaos as an adverse physical environment and its association with language outcomes in poverty contexts was an analysis carried out and it is presented as an exploratory finding.

Birth Order, Stimulating Parenting Practices, and Chaos: From the Individual to the Contextual Level in MADI's Findings, Including Cognitive Outcomes

In terms of birth order, studies of human capital (Hotz & Pantano, 2015), language (Hoff, 2006), and child cognition (Kampouri et al., 2018) in HICs suggest that first-borns exhibit higher performance than nonfirst-borns. Limited research focusing on the effect of birth order on developmental outcomes has been carried out in Latin America. However, we included in our own study an analysis of birth order controlling the effect of stimulation at home. Our finding was that the developmental trajectories of the first-born presented higher scores in motor, adaptive, language, and personal–social development in contrast to nonfirst-borns. Besides regarding motor behavior, the primogeniture effect was enhanced by a good, stimulating environment. In this regard, data were analyzed with linear models of mixed effects adjusted for the mother's age and education, family income, maternal profile, and level of environmental stimuli at home (HOME), exploring the interactions up to the third grade (Márquez-Caraveo et al., 2021).

Home environments are the social and physical spaces that enable exchanges in diverse actions linked to child development (Bradley et al., 2001; Austin et al., 2006; Lehmann et al., 2018). Regarding their importance, in a first paper we documented the variability of home environments in our low-income cohort, providing evidence for the changes over time of the parenting practices during the first year of life and assessing their relationship with socioeconomic variables. Through a hierarchical cluster analysis, two clearly high and low differentiated trajectories in four out of the six sub-scales assessed with the 62-Home Inventory version (62-HI) were identified. This complete 62-HI version, its sub-scales, and its corresponding items were also included (Zanabria-Salcedo et al., 2006). High and low typologies were identified through the following sub-scales:

1. Caregiver's sensitivity and stability (Sensitivity), including the father's role.
2. Encouraging cognitive and language stimulation (Cognitive) is a sub-scale that measures parental interchanges with the child (visual, vocal, affectionate, playing) aimed at stimulating the child's cognition and language development.
3. Breadth of social experience (Social), relates to the promotion and fostering of social interactions and experiences offered by the family.
4. Organization of the physical environment (Organization) corresponds to the provision of an organized, uncrowded, and clean home with low levels of noise.
5. The emotional warmth (Warmth) sub-scale indicates the emotional closeness and acceptance of the child.
6. Opportunity for action (Opportunity) is a sub-scale that measures the caregiver's promotion of physical freedom to interact with the external world. Notably, maternal education (as a proxy indicator of SES) was associated with an increased number of these subscales (Zanabria-Salcedo et al., 2006).

Chaos is a variable that describes the physical and spatial organization in the home environment. As Dumas et al. (2005) point out, "it is not limited to one more indicator of psychosocial adversity" but rather a variable "in its own right," even when controlling for SES. In this sense, it has been described that high degrees of chaos are demonstrated by high disorder and the absence of stable and structured routines (Evans & Wachs, 2010). Higher levels of chaos have been associated with environments of psychosocial adversity, a greater number of negative events in life, upbringing, and unfavorable interactions between parents and children (Whitesell et al., 2015). The chaotic environment at home has been shown to be detrimental to language development as well as the cognitive and socio-emotional spheres in the lives of children and adolescents (Evans et al., 2005). In Mexico, limited research has been carried out in the study of the relationship of these variables. Thus, we evaluated the relationship between lower SES and a higher level of chaos at home, with developmental outcomes in children from 0 to 3 years of age. Besides, a secondary analysis was carried out based on the data of the 49 healthy newborns with low perinatal risk recruited by MADI. Chaos at home was measured using a compound of items from HOME (Cravioto et al., 1998) and Sanitation of the household (DOSAVI after its initials in Spanish). Using inferential statistics, the relationship between the level of SES, chaos, and language development was evaluated. As far

as it is documented by a review of the literature in English and Spanish, this would be the first study to report the chaos variable in Mexico and Latin America. The results confirmed its association with motor development and marginally with personal–social development. Also, there was a relationship between the lowest SES with the highest level of chaos and vice versa in the homes of the study population.

Cognitive development has been another of the widely studied aspects concerning SES, education, and parental occupation (Bradley et al., 2001; Clearfield et al., 2015; Segretin et al., 2016; Lehmann et al., 2018). We also studied the cognitive development from a Piagetian theoretical perspective and assessed the sensorymotor development (0–24 months of age) of 39 newborns longitudinally (monthly in the first year and bimonthly in the second) using the Uzgiris–Hunt Scale. The findings showed significant associations in the domains of means and ends, vocal imitation, and coordination of schemes with the socioeconomic conditions of life in a context of poverty (Solís, 2017). Taken together, these findings as much as ours, provide evidence for early detection and intervention in disadvantaged contexts.

Variability of Parenting Practices in Poor Urban Families in Mexico City

In this subsection, we report the latest findings of the MADI cohort, "Variability of parenting practices in poor urban families in Mexico City," integrating previous data (Zanabria-Salcedo et al., 2006). Briefly, through monthly follow-up home visits that started in the first month of life, lasted 24 months, and were carried out every 3 months until they reached 36 months of age, 91 newborns were recruited in 2 public hospitals in Mexico City: Hospital de la Mujer (Women's Hospital), and CIMIGEN (an acronym for Maternal and Child Research Center of the Birth Studies Group in Spanish). For our research, the Institutional Research Ethics Committee approved the MADI protocol. Mothers and fathers were invited to participate in the study through informed consent. The study was carried out from 1991 to 1994. The validity of these data is based on the documented assumption that the context of poverty in Mexico has been reported given the fact that per capita income decreased by 0.38% during the 1992–2014 period (Íñiguez-Montiel & Kurosaki, 2018). The inclusion criteria in the study included being a newborn at term, being contacted between 24 and 36 h of extrauterine life, weighing more than 2500 g, having an Apgar score equal to or above 8 at 1 and 5 min after birth, and being referred to the rooming-in service for healthy newborns. Only children that completed at least 80% of the assessments were included. The exclusion criteria comprised newborns with a congenital anomaly, fetal distress, or an obstetric complication. The elimination criteria covered newborns not located at hospital discharge, refusal to continue in the study, changed their address without notification, and the infant's death. The attrition of the cohort was 91 participants to 49, 24 boys and 25 girls. During the first year of life, 11 of the participants were not located because the home address

given in the first contact was erroneous. Once the home visits started, 2 participants changed their address without prior notification, 12 participants refused to continue in the research protocol, and 1 participant died of infectious medical causes. During the second and third years of life, 5 participants were lost because of a change of address without prior notification, 3 participants changed their city of residence, and 3 refused to continue with the protocol. We also excluded 2 participants who did not meet the minimum number of evaluations during the 3 years of life, i.e., at least 22 out of 28 evaluations. During the first year, 26 participants were eliminated, and 16 during the second and third years of life. Thus, in this analysis, 49 children were included.

The instruments that were used were:

1. The Gesell Evolution Development Schedule in the version proposed by Cravioto and Arrieta (1982) and validated for the Mexican population to assess developmental status. This score is reported in terms of days of motor, adaptive, language, and the personal–social development domains. The instrument's cultural adaptation and criterion validity were reported from longitudinal studies in Mexican children from rural and urban areas (Cravioto et al., 1998; Gesell & Amatruda, 1997; Martínez-Vázquez et al., 2018).
2. The Home Observation for the Measurement of the Environment Inventory was used to evaluate parenting practices from 0 to 3 years in the 62 reactive version of Caldwell and Bradley (1984), adapted by Cravioto et al. (1998) and validated by Rivera et al. (2010). This instrument had empirical data related to its cultural adaptation and validity in Mexican samples (Cravioto et al., 1998; Rivera et al., 2010). The HOME scoring is based on the child's chronological age. Namely, a total percentage (100%) is given under the assumption of total items, i.e., 0–2 months 50 items, 3–8 months 54 items, 9–11 months 55 items, 12–14 months 57 items, 15–17 59 items, and 18–35 months 62 items.
3. Medical records, including medical history (Schwarcz et al., 1983), were obtained to collect variables such as sex, Apgar score, birth order status, weight, height, and information regarding the child's breastfeeding status and duration.
4. Interview questionnaires carried out every 6 months during the first 3 years of life, were collected to evaluate family socioeconomic levels and maternal education (Ontiveros-Mendoza et al., 2000).

Parents were contacted in delivery hospitals when the children were born. Data were obtained from the clinical hospital records and via direct interviews with their mothers. After the discharge of both neonate and mother our evaluations were carried out through home visits. Evaluators included nurses, psychologists, and education professionals trained and evaluated with a 0.98 inter-observer reliability in each instrument used. The visits were conducted in pairs in order to ensure the reliability of the data and each session was videotaped. Participants accepting the invitation did not receive any monetary stimulus. Missing data due to unsuccessful home visits in the chosen participants did not constitute a vital bias source given the fact that data verification was carried out through a sensitivity study.

Table 2.1 Infant, parental, and environmental characteristics of children and their families

Characteristics	*n/M*	*(%/P_{25}, P_{75})*
Infant characteristics		
First-born (yes)[a]	25	(51)
Sex (boys)[a]	24	(49)
Birth weight (kg)[b]	3.1	(2.85, 3.35)
Birth length (cm)[b]	50	(49.0, 51.0)
Gestational age (weeks)[b]	39	(38.5, 40.0)
Apgar 1 min (0–10)[b]	8	(7.0, 8.0)
Apgar 5 min (0–10)[b]	9	(9.0, 9.0)
Breastfeeding (yes)[a]	44	(90)
Breastfeeding duration (months)[b]	7	(3.0, 10.5)
Parental characteristics		
Maternal age (years)[b]	22	(20.0, 25.0)
Paternal age (years)[b]	25	(22.0, 29.0)
Maternal education (years)[b]	9	(7.0, 11.0)
Paternal education (years)[b]	9	(6.0, 12.0)
Maternal occupation (household)[a]	41	(84)
Paternal occupation (underemployed)[a]	28	(57)
Environment		
Type of household, 12th month (nuclear)[a]	39	(80)
Type of household, 36th month (nuclear)[a]	44	(90)

$n = 49$. *M* median
[a]*n (%)*
[b]*M (P_{25}, P_{75})*

There were 49 participants, out of which 51% were firstborns, 24 were boys, and the mean of the gestational age in weeks was 39. The Apgar mean score at 1 min was 8 and at 5 min it was 9; 90% were breastfed, with a mean duration of 7 months. The median maternal age was 22 and the mean paternal age was 25 years. The educational mean measured in years was 9 for both mothers and fathers. In terms of employment status, 84% of the mothers worked in the household and 57% of the fathers were underemployed. Most households were nuclear (Table 2.1).

For each domain of development, children were classified according to their trajectory using the *k*-means algorithm for longitudinal data. This method is an unsupervised technique for clustering individuals according to the score obtained in such a way that children with similar patterns are classified and excluded from others with different trajectories. The number of clusters was chosen based on the Calinski & Harabasz quality criteria (Kryszczuk & Hurley, 2010). Using a similar methodology, the total HOME and its different scales were used to classify the stimulating

environmental conditions over time. In this sense, based on trajectories, children were classified by a categorical variable for each development domain and each scale of HOME. Through a Multiple Correspondence Analysis (MCA) we explored the multivariate relationship among the categories of the developmental domains and the groups of the different scales of HOME. MCA is a dimension reduction technique applied to categorical variables comparable with the Principal Components Methodology for quantitative variables. Using a two-dimensional graphical representation, the MCA identified associations between child development behavior and HOME conditions. R software 4.0.3 was used for statistical analysis. Following the longitudinal cluster analysis, children were classified into two groups according to each developmental trajectory: motor, language, adaptive, and personal-social. Figure 2.1 shows the trajectory per child over time (3 years). It is worth noting that during the first months of life, developmental scores were quite similar among children. Nevertheless, after approximately 20 months, the two groups' scores differed and dispersed increasingly as the children grew up. Infants with higher scores appeared in the upper part of the spaghetti graph. The individual trajectories and the mean trajectory per group and domain are shown in Fig. 2.1. The difference in trends and the difference between groups in the trajectory are evident at the end of the follow-up.

In addition, two groups were also classified for each HOME sub-scale and the total HOME score. Figure 2.2 shows the mean trajectory per group. Some subscales discriminate between groups with a high trajectory and those with a low trajectory better than others. For example, the mean trajectories in the organization sub-scale are completely separate, whereas those of the opportunity sub-scale wholly overlap. In Fig. 2.2 we can see the trajectory of high and low groups per HOME sub-scale. The distribution of groups per HOME sub-scale was the following: 82% appeared in the high trajectory in the sensitivity sub-scale; 59% in the cognitive; 90% in the warmth; 65% in the opportunity; 67% in the social; 61% in the organization, and 45% in the total HOME scales.

Associations between the groups in a total HOME score and the groups in the different developmental domains were explored through contingency tables and a Chi-squared test. These associations were summarized in Table 2.2. As observed, the higher the quality of the home environment, the higher the developmental achievement, and conversely, the lower the quality of the home environment, the lower the developmental achievement. Regarding the effect size of this association, a medium effect size was presented in the adaptive, language, and personal-social domains, whereas a small effect size was observed in the motor domain (Table 2.2).

The distribution of the groups per developmental domain was the following: 57% of children were in the high trajectory in the motor domain; 51% in the adaptive; 61% in the language area; and 59% in the personal-social.

As a result of the MCA, it was possible to observe the relationship between the grouping domains of development and the groups of total HOME (Fig. 2.3). Because MCA is a dimension reduction technique, the percentage of variance explained with two dimensions was total. However, the horizontal axis explains 72.2% and the vertical axis explains 11.5%. Thus, in total, in the figure, 83.7% of the variability is

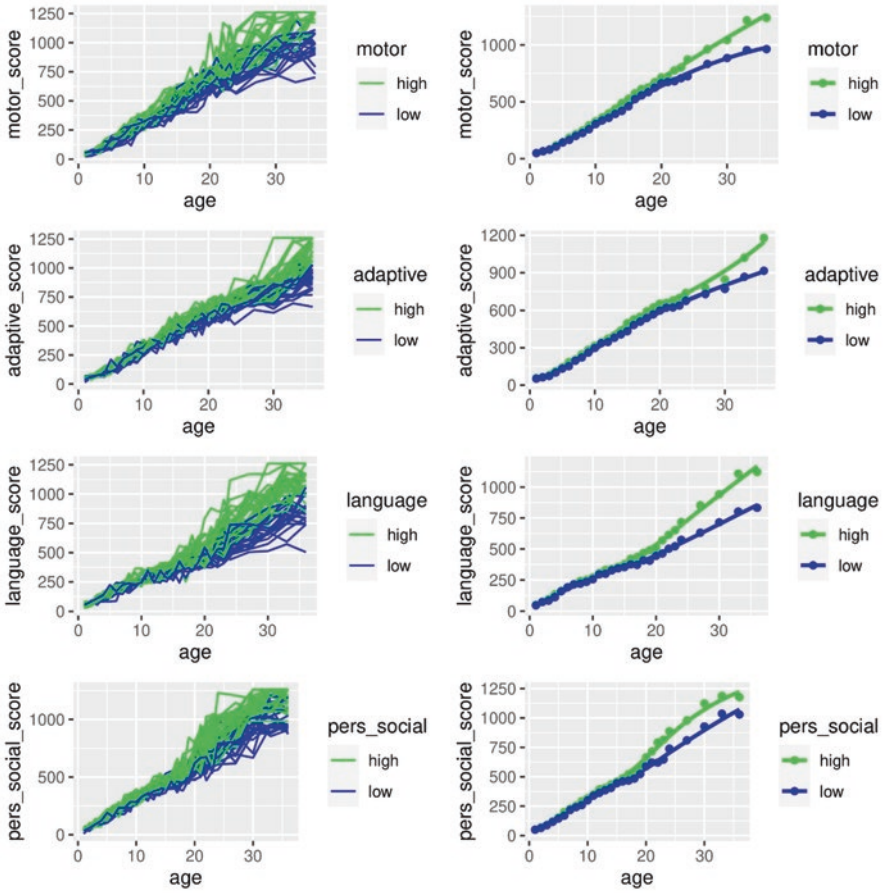


Fig. 2.1 Individual and group trajectories per domain of development from birth to 3 years. The graphs correspond to the four development domains: motor, adaptive, language, and personal-social. The first column represents the trajectories for each domain and the second green lines represent the trajectories of those children with better scores (the *k*-means algorithm for longitudinal data was used for clustering).

represented. Although the interpretation of the two axes is not straightforward, we can interpret that joined points represent the association. According to the color scale shown on the right-hand side, variables represented by red labels have a higher contribution to the explained variability, whereas green labels have a reduced contribution. In Fig. 2.3, we can see that groups with a high development trajectory (motor, language, adaptive, and personal-social) are presented together in the upper-left quadrant in opposition to the low development groups located in the lower-right quadrant. Interestingly, on the left-hand side, high levels of child development and high levels of HOME scales are plotted in opposition to the corresponding low levels. Besides, it is worth noting that the first-born category is located very close to the

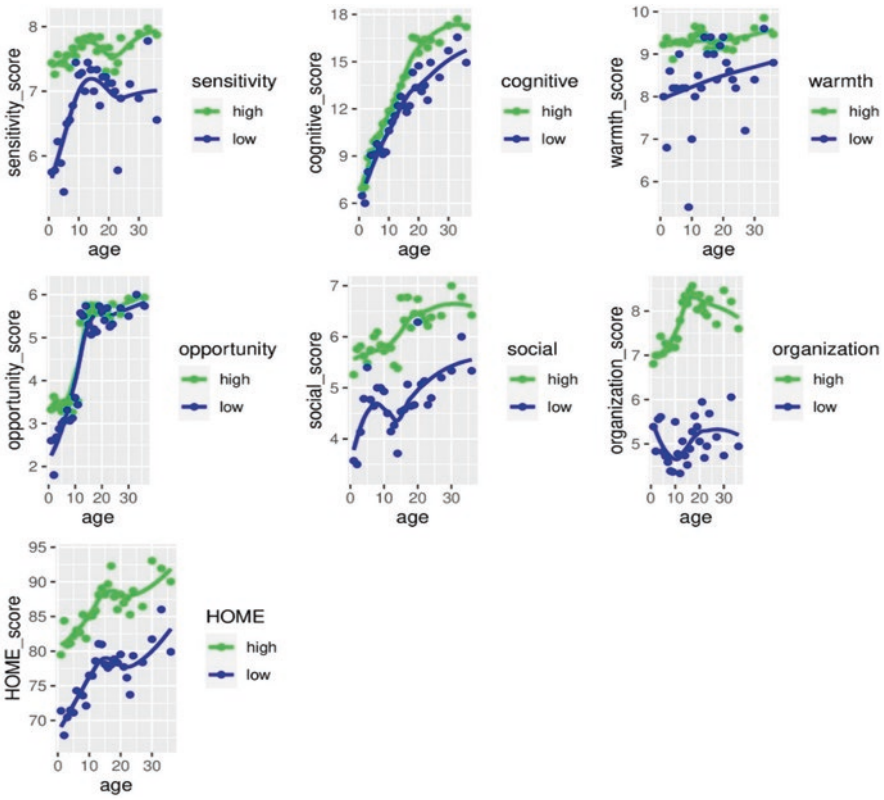


Fig. 2.2 Mean trajectory per group of the HOME sub-scales. The green lines represent the trajectories of those children with better scores (the *k*-means algorithm for longitudinal data was used for clustering)

high development groups, but the later-born category is on the low levels. Gender and high groups of sensitivity and warmth sub-scales are so close to the axis that their contribution to the variability was scarce.

Our results suggest that high child development levels may be associated with being first born and a good HOME quality. In contrast, low levels of development may be associated particularly with low sensitivity and being born later.

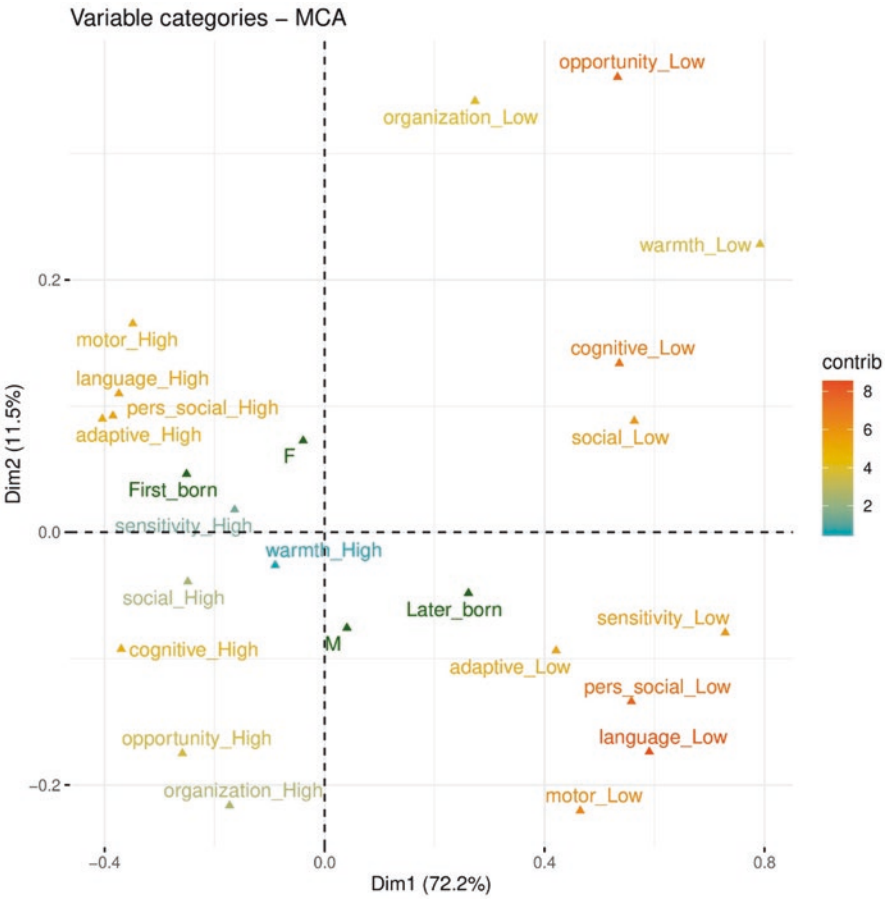
In summary, findings in the literature also provide evidence regarding those variables at the individual or contextual level related to the best ECD results in children growing in urban poverty contexts. At the individual level, the role of being the first-born variable stands out. This variable has been scarcely studied in Latin America and limited to research in the pre-school period (De Haan et al., 2014). In this sense, our line of research is, as far as we have information available, the first to document the importance of this variable associated with early developmental outcomes, in a specific context of socioeconomic adversity. Thus, the proposal for the Latin American context is the recommendation to include this variable in future

Table 2.2 Comparison of high and low group proportions in the total HOME per developmental domain

Developmental domain	Total HOME						
	High (n = 22)		Low (n = 27)		χ^2	ES	p
Motor							
High (n = 28)	16	(57)	12	(43)	3.96	0.28[s]	0.047
Low (n = 21)	6	(29)	15	(71)			
Adaptive							
High (n = 25)	16	(64)	9	(36)	7.53	0.39[m]	0.006
Low (n = 24)	6	(25)	18	(75)			
Language							
High (n = 30)	18	(60)	12	(40)	7.13	0.38[m]	0.008
Low (n = 19)	4	(25)	15	(75)			
Personal-social							
High (n = 29)	18	(62)	11	(38)	8.47	0.42[m]	0.004
Low (n = 20)	4	(20)	16	(80)			

For each domain of development, the proportions of high versus low groups in the HOME inventory were compared in the two contrasting developmental trajectory groups
The data were summarized in n (% by row)
ES effect size by Cramér's V, where the superscript "s" and "m" indicate small and medium effect size respectively, p value calculated using Pearson's Chi-squared test

studies, particularly in low-income populations. The implication for intervention programs in favor of ECD for disadvantaged children in our region is then to evaluate the role of primogeniture in the allocation of affective, stimulation, monetary resources, permanence in school, etc., in families in contexts of poverty concerning the birth order of their children. Our findings at the contextual level confirm the ability of the HOME inventory of 62 items to distinguish the quality of the home environment and the parenting practices reflected in it. In congruence with what was previously reported by the authors (Zanabria-Salcedo et al., 2006), the existence of 4 different trajectories is confirmed in the practices of sensitivity, cognitive stimulation, breadth of social experience, and organization of the physical environment, particularly after the first 20 months of life. These two typologies reflect that there are families that progressively promote these positive practices (upward trajectory) and display higher expressions of these practices, whereas others show a downward trend. Although the impact on child development is observed in the four domains studied, the association is stronger in the personal-social, adaptive, and language sections. These findings suggest that although total HOME has been the study variable in many international and Latin American studies, it is essential to differentiate the contribution of the different subscales from child outcomes. Additionally, families in contexts of poverty are not homogeneous, nor do they all provide their children with inadequate parenting practices; nor do all practices have the same impact on different domains of development. In countries with limited resources such as those in Latin America, it is essential to distinguish the families that most urgently need guidance on parenting and on the specific type of parental quality needed for the best possible future trajectories.



Note. Dimension 1 (horizontal axis) explains 72.2%, dimension 2 (vertical axis) explains 11.5% of the total variability.Motor high, adaptive high, language high, and personal-social high variables, as well as its Low counterparts, correspond to the domains of the development. Sensitivity high, cognitive high, warmth high, opportunity high, social high, organization high, and material high variables, together with low versions correspond to the HOME sub-scales.

Fig. 2.3 Biplot for development and HOME. Dimension 1 (horizontal axis) explains 72.2%, dimension 2 (vertical axis) explains 11.5% of the total variability. Motor high, adaptive high, language high, and personal-social high variables, as well as its low counterparts, correspond to the domains of the development. Sensitivity high, cognitive high, warmth high, opportunity high, social high, organization high, and material high variables, together with low versions, correspond to the HOME sub-scales

Perspective and Concluding Remarks

The purpose of this chapter was to provide evidence regarding ECD outcomes in the context of urban poverty informed by international, Latin American, and our own research. In agreement with other authors, such as Lejarraga et al. (2002) in Argentina or Austin et al. (2006) in Paraguay, we observed that the differences between developmental trajectories appear as early as 20 months. Altogether, these findings provide evidence regarding the first 20 months of life as the most opportune period for intervening in favor of ECD. As Andrew et al. (2018) suggest, intervening after 2 years of age shows no benefit.

We consider a further major contribution of our study to be the recognition of children and families with higher levels of developmental progress, which would infer that although poor children benefit from psychosocial stimulation in general, it is essential to identify the families that urgently require intervention, as well as the specific type of intervention they need. As our findings suggest, these interventions would include parental visual, vocal, affectionate and playing interchanges, fostering social interactions and experiences and the provision of an organized, clean home with low levels of noise and not overcrowded. Additionally, we outline how the social and organization subscales showed high and low trajectories from birth, whereas the cognitive subscale exhibited two distinctive paths later on, at approximately 15 months of life. This finding suggests that the social and organizational aspects of caregiving are already present as environmental features early in life. On the other hand, vocal, cognitive, and learning activities provided by an intuitive mother develop progressively as the interchanges with the child increase. Hence, low stimulation caregiving practices are present in *some* low-income families.

In Bornstein and Putnick's study (Bornstein & Putnick, 2012) of caregiving in developing countries, in which only Jamaica and Belize of the Latin American and Caribbean region were included, it was found that in the 28 countries analyzed, less than one-third of mothers read books or told stories to the child. Later on, the same authors documented that in 39 countries assessed (again, from the Latin American and Caribbean region only Jamaica and Belize participated) mothers engaged more than fathers in caregiving, a finding is also true even in HICs. However, in the socio-emotional domain (for example, singing, taking the children outdoors, or playing) their engagement was deeper than in the cognitive domain (for example, name, count, draw). In this regard, 44% of mothers carried out this practice, but only 17% of fathers (Bornstein & Putnick, 2016). Studies all over the world have shed light on the nature of the association between SES and language development, as mediated by caregiving practices, particularly in Africa (Prado et al., 2017) and in Asia and the Pacific Region not only in terms of language, emergent literacy, and cognition but also of socio-emotional development and approaches to learning (Sun, et al., 2018).

These two key findings allow us to expect that the development of children from low-income families can be facilitated by orientation programs for parents seeking to improve their home environment. However, for it to be effective, such an intervention would have to be implemented early, before the target child is 20 months old.

Limitations, Challenges, and Opportunities in the Study of ECD in Latin America

In the field of human capital development, it is clear that well-designed early childhood programs can contribute to promoting long-term, healthier development. This long-term benefit, which would be an asset not only for disadvantaged children but for society in general, shows to be closely related to greater attainment in school, higher earnings, and lower crime.

Finally, as inequalities in developmental outcomes present as early as in the first 2 years of life (Armstrong et al., 2019), the design and implementation of ECD intervention programs in Latin America and the Caribbean face enormous challenges that include some of the following issues:

1. Variables and measurements—the evidence in Latin America in the field of poverty, caregiving, and ECD reflects substantial progress. However, in order to have comparable results it is necessary to optimize efforts in the development, adaptation, and validation of the instruments according to each region. In his review, Frongillo et al. (2014) recognizes that the HOME inventory, as well as the FCI, are indicators of the caring environment. However, as can be seen in the literature, the parenting research data are based on the short version of the HOME in Chile (Salinas et al., 2021), the HOME of 45 items in Mexico (Knauer et al., 2019), the FCI (Rubio-Codina & Grantham-McGregor, 2019) or the HOME of 62 items in our studies and of other developmentalists (Ontiveros-Mendoza et al., 2000). Regarding developmental outcomes, very few tests have been validated in LMICs, particularly the Bayley scales or the Ages and Stages Questionnaire (ASQ). As suggested by Fernald et al. (2017) there is as yet no test available for researchers and the personnel of intervention programs that informs policy and practice, i.e., that measures the domains that range from physical health and infantile growth infantile, to cognitive, socio-emotional development, temperament, and approach to learning.
2. Outcomes and other variables to include—there is sound evidence of parenting practices as a mediational pathway between SES and cognition language, emergent literacy, and approaches to learning (Sun et al., 2018; Prado et al., 2017). Less has been studied regarding socioemotional development or infant well-being, which are variables that future research should consider. At a contextual level, in HICs, household chaos has been associated with worse cognitive (Petrill et al., 2004) and language development (Vernon-Feagans et al., 2012). In agreement with these findings, Knauer et al. (2018) reported that in Mexican indigenous and non-indigenous communities, overcrowded homes are associated with less stimulating parenting only in non-indigenous communities.
3. Ethnicity—developmental scientists in the region are already providing data related to an often-ignored niche of research, the indigenous population. In Chile, Salinas et al. (2021) documented that the gap between Mapuche and non-Indigenous Chilean children starts before they enter primary school and that

parenting behaviors and socioeconomic resources partly account for it. Interestingly, enriching learning environments have more impact on Mapuche children than on non-indigenous children. Knauer et al. (2018) have reported similar findings in Mexico, where the associations between stimulating practices and a set of variables at a child, household, and community level among children aged 4–18 months in rural communities have been observed. Their findings documented that although negative stimulating parenting is associated with living in an indigenous community, there is significantly more stimulating parenting within it than in a non-indigenous community. Both findings offer important implications for social policy plans and programs aimed at ameliorating poverty and ECD non-optimal developmental outcomes in the indigenous population.

4. Caregivers—for a long time, research has focused on the mother's caregiving role. Nonetheless, there is plenty of evidence about the importance of the father's involvement. In LMICs, although fathers are less involved in cognitive caregiving and socioemotional caregiving (Bornstein & Putnick, 2016) a recent study from rural Burkina Faso (Hollowell et al., 2020) documented that fathers, older children, and grandparents are also important caregiving figures. As suggested by Jeong et al. (2017) future ECD intervention studies demand a family approach of nurturing care that evaluates multiple changes in multiple caregivers' parenting practices.
5. Interventions—in a meta-analysis carried out by Jeong et al. (2017) regarding early stimulation interventions in LMICs, the evidence gathered from randomized studies confirmed a medium to large benefit in improving the home stimulation environment, mother–child interactions, and mother's knowledge of ECD. Although this evidence already exists, there is still a need for a holistic and systematized evaluation approach to parenting outcomes that informs which parenting mechanisms best benefit children in order to design programs with the best impact.

A major challenge in research is the transfer of evidence to practice. Hence, when some authors evaluate intervention programs that integrate nutrition and stimulation, they propose it through a matrix of the characteristics of the implementation (Yousafzai & Aboud, 2014). According to some studies (Knauer et al., 2016; Rodríguez et al., 2011), learning experiences in the first 3 years of life can be essential for children's early development as language skills are emerging and can impact them at later stages. In fact, infants benefit from parental expression, i.e., singing, storytelling, and reading or naming objects. These practices seem enjoyable, simple, costless, but wasted if parents are not informed about their potential when stimulating their babies.

Finally, as suggested by Bornstein and Putnick (2016), the macrosystem of caregiving is influenced by political and economic factors that include laws and traditions that define each particular society. Therefore, programs favoring ECD should be tailored according to the global and local evidence already provided. Additionally, social, health, and education policies promoting ECD in LMICs should be evidence-based and informed in the variability of poverty contexts and the identification of strengths as much as shortcomings in low-income families.

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Chapter 3
Parental Concern in Typical and Atypical Language Acquisition of Monolingual Spanish-Speaking Children in Adverse Social Conditions

Christian Peñaloza, Alejandra Auza, and Chiharu Murata

Introduction

Within the diversity of trajectories in language acquisition, an significant group of children present persistent difficulties, with varying degrees of severity, and different types of signs and symptoms from the preschool stage. Currently, it is proposed to name these difficulties Developmental Language Disorders (DLDs) (Bishop, 2017; Bishop et al., 2017). In the Hispanic American context, there has been a growing interest in knowing the relationship between its manifestation and some family conditions and the sociocultural environment of the children. This knowledge will favor early detection processes, which will reduce the impact on the social, emotional, and academic life of these children.

One of the elements considered is the risk perception that mothers and fathers may have of their children's linguistic development. Although its use in the process of identifying children with DLD has been recommended for decades (Restrepo, 1998), in practice it is not information that is usually used systematically to arrive at the subsequent results early in support of these children and families. In the

C. Peñaloza
Department of Speech Therapy (Departamento de Fonoaudiología), University of Chile, Santiago, Chile
e-mail: cpenaloza@uchile.cl

A. Auza (✉)
General Hospital "Dr. Manuel Gea González", Mexico City, Mexico

Autonomous Metropolitan University, Mexico City, Mexico

C. Murata
Autonomous Metropolitan University, Mexico City, Mexico

Research Division at National Institute of Pediatrics, Mexico City, Mexico

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Mexican context, where there is neither information on the prevalence of the disorder nor systematic screening processes in schools or health services, the resource of parental perception can become a very useful tool. However, there is controversy about the quality of the information reported by parents, particularly in contexts of social vulnerability, such as those experienced by many families in Mexico and Latin America. Therefore, in this chapter we systematize our experience with risk perception information reported by parents in a screening process for monolingual children with DLD. Our results show that parental reports can provide valuable support in the early identification of children with persistent language difficulties.

Conceptual Framework on Parental Concern

A child's development emerges through the interaction of numerous self and environmental factors that shape opportunities and barriers to growth (Bronfenbrenner & Morris, 2006). In relation to linguistic development, there is abundant evidence of the influence on it of the different elements of social interaction and of the social and cultural conditions of their environments, whether in typical or atypical development (Berry et al., 2016; Vernon-Feagans et al., 2012). Among these factors, sensitivity brings together the skills presented by parents and/or primary caregivers of the child to perceive interpret and respond appropriately to the signals that the child manifests in its development (Ainsworth et al., 1974). In general, a positive relationship has been recognized between parental sensitivity and children's cognitive and linguistic development, especially at early ages, although this dimension is not always included in research on early language development (AlHammadi, 2017).

One component of sensitivity is parental perception or concern (parental concerns) (Algarvio et al., 2013; Reijneveld et al., 2008), understood as that ability to recognize warning signs from the child's manifest behaviors, whether linguistic, cognitive, motor, social, or academic. Research in this regard indicates that parents and caregivers are usually sensitive and accurate in detecting signs in the usual behaviors of children, which allow them to express concern or reassurance about their development (Guiberson et al., 2011) and that this monitoring is integrated into their usual parenting practices (Algarvio et al., 2013) from ongoing interaction and their own adjustment of expectations based on their own cultural knowledge (Bishop & McDonald, 2009).

Parents of children with some developmental difficulty are known to detect that their children present special behaviors, such as being more withdrawn and with a more difficult temperament than typically developing children of the same age (Sanson et al., 2004). This makes parental perception a very useful source of information for clinicians. However, some studies have shown discrepancies between parental perception and clinical assessment outcome, which have been explained in different ways. For example, it is likely that parents and clinicians focus their observation on different behaviors of the child, making both resources complementary, rather than substitutes (Guiberson et al., 2011). Similarly, the impact of parent's

mental health and socio-educational level has been noted, the latter with mixed results (Cabrera et al., 2007; Tamis-LeMonda et al., 2004). In contexts of poverty and social vulnerability, fathers and mothers may have lower levels of perception of the child's needs, probably because they are in a context that favors less time interacting with them and a low self-perception of their parental quality (Mesman et al., 2016). However, other studies do not observe differences in the level of parental concern according to socioeconomic status (Algarvio et al., 2013; Reijneveld et al., 2008).

Within developmental difficulties, Developmental Language Disorder (DLD) (Bishop, 2017) is a condition characterized by expressive problems in the linguistic domain persistent over time, with an undetermined etiology, which manifests from the preschool stage and impacts the quality of life of girls and boys, including their academic and emotional domains (Eadie et al., 2018).

Parental Concern in Studies of Latin American Children with DLD

Interest in DLD has been growing in Latin America in the last two decades. Numerous investigations have made considerable progress in the linguistic characterization of the condition, especially in monolingual Spanish-speaking children (Auza et al., 2018a; Auza & Morgan, 2013a, b; Coloma et al., 2017; Ferinu et al., 2021a; Peñaloza, 2018).

In Mexico, multiple lines of interdisciplinary work have been carried out on the detection and characterization of children with DLD. On the one hand, it has deepened knowledge about the linguistic manifestations of Spanish-speaking children, both in the context of a formal assessment and in the context of a narrative retell task, a method widely used in clinical assessment, and in various child populations, such as children with typical development, with DLD, or within contexts of great social vulnerability (Auza et al., 2019; Auza et al., 2018a, b; Peñaloza, 2018, 2019). This has also allowed us to better understand which linguistic aspects are relevant when identifying children with language difficulties and, thus, to have a screening tool for early identification of monolingual Spanish-speaking children with grammatical problems: the Tamiz de Problemas de Lenguaje (TPL)-Language Problems Screening (Auza et al., 2018c). This instrument identifies children between the ages of 3 years and 6 years and 11 months, with suspected language impairment and, within this group, those with a high probability of being diagnosed with DLD. As it is a screening test, both the judgments of suspicion and high probability of DLD should be corroborated by a professional expert in language assessment.

On the other hand, the family and socioeconomic conditions have been characterized in depth in which a significant number of monolingual Spanish-speaking Mexican children with a DLD from different urban centers of the country develop. It has been observed, for example, that a set of environmental characteristics (such

as low parental schooling, patterns of disorganization in the home, low preschool attendance by the child, and parent–child interaction practices with less cognitive stimulation) is associated with a higher probability of being diagnosed with DLD, without implying a causal relationship (Auza et al., 2019; Auza & Peñaloza, 2019; Peñaloza, 2018). This picture broadly coincides with what has been described in relation to Spanish children with DLD (Ferinu et al., 2021b). Likewise, with the characterization of the psychosocial environments in which the linguistic development of Mexican children generally occurs (De Castro et al., 2019; Izazola et al., 2017; Vázquez-Salas et al., 2020), in which preschool attendance, access to books, good nutrition, and higher parental schooling appear as protective factors.

Although progress has been made in defining DLD identification methods for the Spanish-speaking population (Auza et al., 2018c; Gutiérrez-Clellen & Simon-Cereijido, 2007; Restrepo, 1998), in Latin America there is a low identification of children with DLD and, probably, it occurs late and without full access to the necessary therapeutic services. Nor are there recent studies showing the prevalence of DLD in Latin America, so the reference for the English-speaking child population is commonly used, which places it between 7 and 12% (Tomblin et al., 1997). In Mexico, the National Health and Nutrition Survey showed that 30.8% of boys and 27.8% of girls between 2 and 9 years of age are at risk for presenting a developmental disorder, particularly cognitive, a category that includes linguistic development (Romero-Martínez et al., 2013).

Parental Concern and the Detection and Characterization of Mexican Children with DLD

The report of parental concern becomes an essential support tool to optimize the early and relevant identification of children with severe language difficulties and reduce their impact on their socialization and schooling processes. In Mexico, the most frequently reported problems by parents belong to the cognitive and communicative domains, such as difficulties in maintaining a conversation or understanding or pronouncing words (Romero-Martínez et al., 2013). These problems were reported in 13.3% of children between 2 and 5 years of age, and in 11.5% of those aged between 6 and 9 years.

Several studies have included parental reporting in the process of conformation of their study samples (Auza et al., 2018a; Gutiérrez-Clellen & Simon-Cereijido, 2007). However, we are unaware of studies in the Latin American context that investigate the characteristics of parental perception of their children's linguistic development and their level of adjustment with the clinical evaluation. These studies exist, for example, in relation to the early detection of children with Autism Spectrum Disorder (ASD), which consistently shows a low parental perception of alertness and a sense of pessimism regarding the communication and behavioral difficulties observed in their children (Montiel-Nava et al., 2017; Zuckerman et al., 2014). This perception is influenced by both the social stigma associated with ASD

and the lack of access to relevant information (Mendoza, 2014; Montiel-Nava et al., 2017; Ratto et al., 2016; Zuckerman et al. 2014).

In the Anglo Saxon context, it has been observed that migrant families of Latino origin present lower levels of reported difficulties in the development of their children (Zuckerman et al., 2009). This may be because the adults in these families perceive greater barriers to accessing health and education services, which discourages them from expressing concern (Bishop & McDonald, 2009). It has also been noted that the way in which information is solicited is crucial, such as anonymous spaces, created to ensure the confidentiality of the information, but that make little sense to Latino parents and discourage them from communicating their parental perception of concern (Read et al., 2007). On a more general level, it has been profusely described how parenting is shaped by intrinsic characteristics of parents from different cultures (Calzada et al., 2012; Chen et al., 2021). This demonstrates the need to inquire into these issues, without generalizing parenting traits from one sociocultural group to others.

Within the framework of these investigations, we have systematically collected information on parental perception of their children's linguistic development. The processing of these data allows us to determine their level of both sensitivity and specificity in the detection of children with suspected and a high probability of language disorder, as well as their characterization in relation to the parents' level of schooling.

In the context of research carried out during the last few years, the level of concern about the children's linguistic development was collected from 415 parents from Mexico, from different urban areas of Mexico City and Queretaro, and with different socioeconomic and educational characteristics (Peñaloza, 2018). The level of concern was collected in order to find out the predictive scope of parental perception in the process of identifying children with a possible language disorder. The participating children were all monolingual Spanish speakers, between 4 and 6 years and 11 months of age, who did not have a history of motor, emotional, neurological, auditory, or cognitive problems. Different instruments were used to assess language skills, including a narrative sample and the administration of TPL-Language Problems Screening (Auza et al. 2018c). This allows the identification of children suspected of presenting language disorder and, within this group, those with a high probability of being diagnosed with DLD. Given that it is a screening test, the judgments of both suspicion and a high probability of DLD should be corroborated by a professional expert in language assessment. Parental perception, on the other hand, was collected through a Parent Questionnaire that was constructed to gather information about the child's development, the characteristics of the child's environment, and the level of parental concern. Eight questions with "Yes" or "No" answers were elaborated, partially inspired by Restrepo's (1998) instrument. In each question, parents had space to complement their answer with a brief description of what they observed. The questions used were as follows:

1. Are you concerned about the way your child speaks?
2. Do other people have difficulty understanding your child?

3. Does your child speak as well as other children of the same age?
4. Does your child speak "funny" or "weird"?
5. Has a family member/teacher commented that your child speaks little or speaks poorly?
6. Does your child understand most of what is said to him/her?
7. Do you have to repeat what you say to your child more than to other children of the same age?
8. Compared with other children of the same age, does your child have trouble understanding questions?

Parents of children were contacted in schools and public health centers in Mexico City and Querétaro, through a talk inviting them to take part in the project. The parents who participated signed an informed consent form, approved by the ethics committee of the Hospital General Dr. Manuel Gea González, in Mexico. The children were evaluated in 2 individual sessions, each lasting approximately 20 min. Children over 6 years of age were asked to agree to participate. At the end of the process, all families received a clinical report describing the child's linguistic performance and indicating the need or not for a language evaluation by an expert professional.

From the administration of the Screening TPL, the participating children were identified as:

1. Not suspected of having DLD.
2. Suspected of having DLD.
3. Highly likely to have DLD.

In turn, parents' responses were recorded for each question about their child's perception of language. If the response implied parental concern, it was labeled as "risk perception"; otherwise, it was recorded as "no risk perception." This information was then cross-checked with the results of the screening administered to the children, applying epidemiological analysis procedures (Altman & Bland, 1994) and the level of association between the mother's and father's years of schooling with the number of risk perception responses given was probed by means of a correlation test. Table 3.1 summarizes the main descriptive results obtained from the administration of the screening test, the parental risk perception, and years of parental schooling on the parents' questionnaire.

From these data, clinical efficacy levels of the number of parental risk perception responses were calculated for each of the screening test classifications. For this, the levels of sensitivity and specificity of the number of parental risk perception responses in relation to the diagnoses offered by the administration of the screening test were established (Table 3.2). To interpret the data in the table, the highest sensitivity and specificity values are observed (Altman & Bland, 1994). According to this, to the extent that parents respond with a risk perception to a greater number of questions, sensitivity is lost, i.e., it is not possible to recognize all positive cases, neither of suspicion nor of high probability of DLD, although in the latter group the sensitivity values are better. On the contrary, a greater number of parental alert

Table 3.1 Descriptive results of the clinical tools

Results from the TPL *N* (%)	
Children *without* suspected DLD	223 (54)
Children *with* suspected DLD Subgroup of children *with a high probability* of DLD	192 (46) 102 (24)
Number of cumulative responses of parental risk perception *N*	
0 1 2 3 4 5 6 7 8	136 47 57 45 34 41 33 17 5
Years of schooling	Mean (SD)
Mother Father	11.2 (4.1) 35.6 (7.8)

DLD Developmental Language Disorder, *SD* standard deviation, *TPL* Tamiz de Problemas de Lenguaje

Table 3.2 Clinical values for the sum of risk perception responses from parents in relation to the results of the screening test

Risk perception responses from parents	Suspected DLD			High probability of DLD		
N	OA [95% CI]	Ss [95% CI]	Sp [95% CI]	OA [95% CI]	Ss [95% CI]	Sp [95% CI]
1	0.64 [0.6–0.7]	0.83 [0.8–0.9]	0.47 [0.4–0.5]	0.53 [0.5–0.6]	0.92 [0.9–1.0]	0.41 [0.4–0.5]
2	0.65 [0.6–0.7]	0.72 [0.7–0.8]	0.58 [0.5–0.6]	0.61 [0.6–0.7]	0.85 [0.8–0.9]	0.54 [0.5–0.6]
3	0.70 [0.7–0.7]	0.64 [0.6–0.7]	0.76 [0.7–0.8]	0.73 [0.7–0.8]	0.80 [0.7–0.9]	0.70 [0.7–0.7]
4	0.69 [0.6–0.7]	0.50 [0.4–0.6]	0.85 [0.8–0.9]	0.77 [0.7–0.8]	0.68 [0.6–0.8]	0.81 [0.8–0.8]
5	0.68 [0.6–0.7]	0.40 [0.3–0.5]	0.92 [0.9–1.0]	0.80 [0.8–0.8]	0.57 [0.5–0.7]	0.88 [0.8–0.9]
6	0.63 [0.6–0.7]	0.25 [0.2–0.3]	0.97 [0.9–1.0]	0.82 [0.8–0.9]	0.40 [0.3–0.5]	0.96 [0.9–1.0]
7	0.59 [0.5–0.6]	0.11 [0.1–0.2]	0.99 [0.9–1.0]	0.80 [0.8–0.8]	0.20 [0.1–0.3]	0.99 [0.9–1.0]
8	0.54 [0.5–0.6]	0.02 [0.0–0.0]	0.99 [0.9–1.0]	0.76 [0.7–0.8]	0.03 [0.0–0.1]	0.99 [0.9–1.0]

DLD Developmental Language Disorder, *OA* overall accuracy, *Ss* sensitivity, *Sp* specificity, *CI* confidence interval

responses are associated with better specificity rates, i.e., it better rules out negative cases. In other words, a low number of parental responses of concern allow the recognition of many children with suspected or highly probable DLD, but also many who do not (false positives). This requires greater confirmatory assessment resources to detect only children with language impairment. In contrast, the strategy of considering children whose parents have a high risk perception captures fewer cases with language impairment (many positives are missed), but that a smaller group of children is composed almost exclusively of cases who do have language impairment (few false positives). This reduces the greater requirement for additional resources at later stages of assessment but leaves out many children who require support. Sensitivity values for parental perception are higher in children with a high probability of a DLD than in children with only a suspected DLD.

Complementarily, a receiver operating characteristic (ROC) curve was obtained for each TPL diagnosis. In a ROC curve graph, the position of the curve and the area under it (AUC) allow us to assess the predictive power of the answers given by the parents. Also, the ROC curve touching the discrimination diagonal indicates that the risk perception responses have predictive value for the condition of each child according to the TPL. In Fig. 3.1, the AUC for suspicion was 0.75, which reports only a fair level of prediction; in contrast, for high probability it was 0.85, which represents an optimal level (Fig. 3.2).

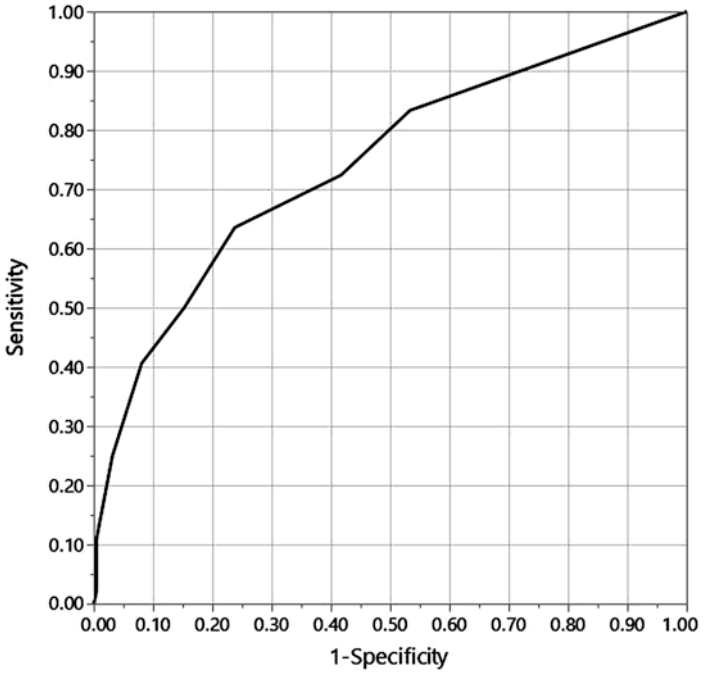

Fig. 3.1 Predictive power of parental risk perception responses for suspected Developmental Language Disorder

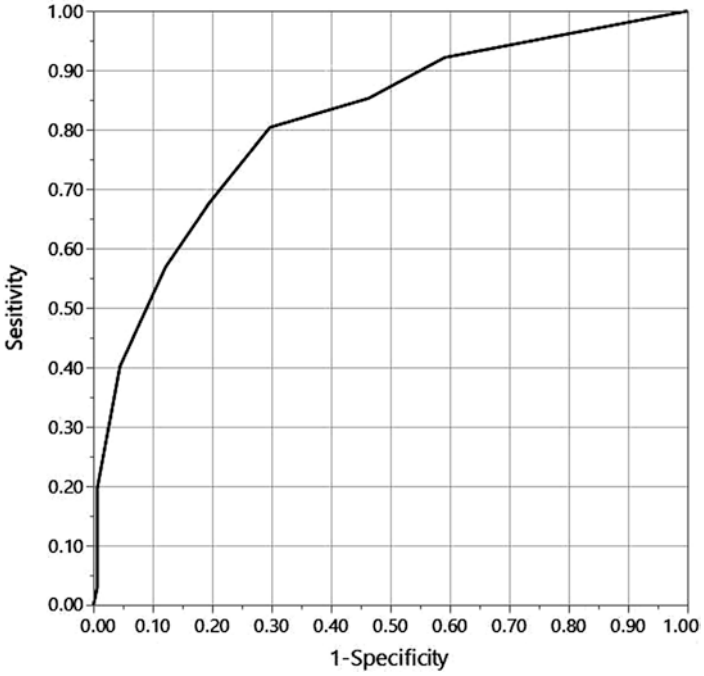

Fig. 3.2 Predictive power of parental risk perception responses for a high probability of Developmental Language Disorder

Finally, we explored whether the number of responses reported in the questionnaires was related to the mother's and father's schooling. For this, correlation tests were applied. In the case of the relationship between the number of risk perception responses and the mother's years of schooling, the Pearson correlation coefficient took a value of $r = -0.13$ ($p = 0.12$). In the case of the relationship between the number of responses and the father's years of schooling, Pearson's correlation coefficient took a value of $r = -0.11$ ($p = 0.06$). That is, there is no linear association between the number of responses and schooling in neither of the cases.

As parental perception reached a better predictability index in the case of children with a high probability of a DLD diagnosis, the relationship between perception and parental schooling was investigated only in this group. In this case, correlation tests again indicated the non-existence of a linear association between the two variables, with an r value = -0.14 ($p = 0.12$) in the case of maternal education, and an r value = 0.05 ($p = 0.89$) in the case of paternal education.

In sum, our results show that collecting parental perception of language is a moderately useful strategy in the detection process of children with suspected or a high probability of having a language disorder. In particular, noncoincident values of sensitivity and specificity were obtained, which implies making some strategic decisions to complement the clinical information, in the case of considering parental perception in the screening process for DLD. A low or moderate perception of

parental concern is a good indication for detecting children with probable problems in their linguistic development (good sensitivity); however, this strategy places a degree of suspicion on many children who do not present any disorder (low specificity). Conversely, if only children whose parents express a high level of concern are formally screened, this will effectively rule out early screening of children without any difficulties (good specificity), but this will result in many children who have language problems also failing to access confirmatory screening (low sensitivity). The sense of early detection suggests favoring greater sensitivity over specificity, even if this involves a greater investment of human resources and time. Finally, it was not observed that a greater number of risk perception responses by parents were related, either positively or negatively, to the mother's and father's years of schooling. Surely, further statistical tests are needed to provide more clarity in this regard, although these results show that, in general terms, the fact that parents perceive a greater risk in their children's linguistic development is not associated with more or less schooling.

The Importance of Considering Parental Concern

Severe and persistent difficulties in language development have important consequences for children's socialization, self-esteem, and school success. In Latin America, we have the important task of detecting these children at an earlier stage and ensuring their access to therapeutic services according to their needs, ideally within the public health and education systems. Currently, neither of these two situations is being fully met, although we are making steady progress in gaining a better understanding of the characteristics of language development disorders for monolingual Spanish-speaking children in the Latin American context.

Faced with the need to adjust our early detection processes, especially in the contexts of greater social vulnerability, the strategy of collecting parental perception of their children's linguistic behaviors seems to be a promising avenue, which may allow us to reach in a targeted manner those children who require a formal linguistic evaluation. It also seems to be a strategy that does not depend so strongly on parental schooling, at least in the context of Mexico's urban population.

Moreover, given that parental reporting showed an optimal level for predicting a high probability of having a DLD, but not for suspected cases, then we can assume that the questions given to parents are an adequate, but not sufficient, way. It is possible that an in-depth examination of parental responses, in the manner of a Piagetian clinical–critical method, could help to unravel some aspects of children's linguistic development, and on the other hand, clarify clinical concepts that may not be clear in parental perception.

The consideration of parental perception can be a positive strategy in other aspects besides clinically; for example, it can reinforce a greater collaborative involvement of the family in the therapeutic process (Algarvio et al., 2013; Ferinu et al., 2021b) and an optimization of parental sensitivity levels resulting in better

outcomes in children's expressive skills (Nwosu, 2016). Both factors can prevent low adherence to treatment, especially in contexts of vulnerability, where the perception of greater barriers to accessing quality services encourages low expectations of improvement and reluctance to consult.

The above notwithstanding, parental involvement in the process of detection and treatment of children with a DLD requires relevant and respectful cultural approaches that avoid the direct transfer of experiences arising in sociocultural contexts different than those of our countries. Along these lines, there are many aspects to deepen. The inclusion of parental concern must be in line with a greater knowledge of the cultural patterns that frame developmental expectations, parenting practices and perceptions about parenthood itself, childhood, and communicative health in the different Latin American cultural niches (Chen et al., 2021; De León, 2019; Fernández & Alarcón, 2020). The above requires, in turn, exploration of some methodological strategies, of a qualitative and ethnographic nature, that are not usually incorporated into research on language development and its disorders, and that allow for a more comprehensive understanding of the impact that the manifestation of a language disorder in their children has for mothers and fathers. That is, it is not only a matter of incorporating their risk perception as information, but also of adequately accompanying the parental process of acceptance of the linguistic condition of their children, with the implications that this entails, both in the self-perception of parental quality and in the fears about the communicative well-being and academic success of the children, an emotional support of parental sensitivity about which we still know little (Ash et al., 2020). This will also make it possible to move toward professional practices with cultural relevance, not only in the context of monolingual children, such as those described here, but also in bilingual and multicultural environments, where they are often invisible (Nieva et al., 2020a, b).

A major limitation to progress along this path is the difficulty in finding a psychometrically and clinically supported parental perception instrument that is both culturally relevant and adaptable to the different contexts of our countries. In general, knowledge about the social and cultural particularities in which communicative development occurs is still scarce, especially in relation to language disorders, an area in which a rather biomedical approach has prevailed. At this point, the challenges ahead are enormous. In addition, the possible differences in parental perception, depending on the sex of the parents and children, should be studied in greater depth, given that in other cultural contexts, differences have been observed in the reports of fathers and mothers about the same child or differentiated according to whether the child is a boy or a girl (Lovas, 2011).

In short, the understanding and professional response offered in Latin America for children with language difficulties is in an exciting period of growth, in which not only the clinical bases are enriched, but also the social and cultural bases that frame it. In this context, the inclusion of parental perception in particular, and of the cultural patterns that guide parents in relation to the linguistic development of their children, are essential and will undoubtedly allow progress toward more relevant and inclusive educational and clinical services that favor the comprehensive development of children and guarantee their rights.

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Chapter 4
Studies on Child Development in Vulnerable Groups in the Metropolitan Area of Buenos Aires, Argentina

Maira Querejeta Echegoyen, María Justina Romanazzi Colombo, and Ana Laguens Harnan

Introduction

Recently, scientific evidence has shown the decisive influence of childhood development on the integral health of people throughout life. For this reason, various countries recognize that it is extremely necessary, first, to include early childhood development as a central dimension to approximate the index of well-being or quality of life of girls and boys and, second, to expand access and continuity in intervention programs in child development, especially in populations in situations of social vulnerability.

Particularly in Latin America, where millions of households are going through a serious social situation (CEPAL, 2021), population studies on child development are essential to estimate children's abilities, skills and knowledge in relation to what is expected at different ages, and to count with useful elements that serve to design promotion strategies and/or intervention in the development of children.

M. Querejeta Echegoyen (✉) · A. Laguens Harnan
Center for the Study of Child Nutrition and Development (CEREN), Scientific Research Commission, Buenos Aires, Argentina

Universidad Nacional de La Plata, La Plata, Argentina
e-mail: mquerejeta@fahce.unlp.edu.ar

M. J. Romanazzi Colombo
Center for the Study of Child Nutrition and Development (CEREN), Scientific Research Commission, Buenos Aires, Argentina

B. E. Barcelata Eguiarte, P. Suárez Brito (eds.), *Child and Adolescent Development in Risky Adverse Contexts*,
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Conceptualizations About Child Psychological Development

In the history of psychology, there have been various proposed conceptions of psychological development. Although these conceptions agree in defining it as a complex process that involves a set of changes produced during the first years of life, they differ with regard to describing and explaining how these changes occur.

Traditionally, the theoretical models that have predominated in psychological discipline have been the *mechanistic* and the *organicist*. The first, framed in behaviorist theory, maintains that psychological development lacks its own internal dynamics and is limited to being a succession of learning. The organicist emphasizes internal processes more than external ones and proposes the existence of an "evolutionary need" that makes development pass through certain phases or stages that constitute evolutionary universals in all people (Palacios, 1991).

Currently, the *dialectical contextual model* has become the frame of reference that includes a great variety of approaches and theoretical perspectives that assume a set of postulates related to development (Palacios & Mora, 2017; UNICEF, 2016):

1. The extension of the development throughout the life of the subject, understanding it as a multidimensional, multidirectional, and contextualized process (Martí Sala, 1991).
2. The relativity of chronological age, as by itself it is not a causal, descriptive, or explanatory factor.
3. The action of a multiplicity of factors (normative graduated by age, normative graduated by history and non-normative events) that interact with each other in determining the changes (Pérez Pereira, 1995).
4. The attribution of the active role of the subject, while insisting on the importance of sociocultural conditions to which a decisive influence is given in shaping the course of individual development (Gutiérrez Martínez, 2005).

The way of interpreting these postulates differs in the different theoretical perspectives, of which we can mention the ecological, the ethological, the cognitive-evolutionary, the information processing (with its most up-to-date versions such as connectionism), and the historical-cultural (Gutiérrez Martínez & Vila Chavez, 2011).

The historical-cultural approach, in which our own studies reported below are inscribed, conceives human development as the synthesis between the biological and the psychological, in a sociocultural and historical framework. On a psychobiological basis, ontogenetic development consists of the progressive appropriation of symbolic instruments and cultural competencies that enable interaction with others. In the words of Vygotsky (2006 [1930]), "it is a complex dialectical process, characterized by periodicity, irregularity in the development of different functions, metamorphosis or qualitative transformation from one form to another, the interrelation of external factors and internal and adaptive processes that overcome the obstacles that the one little crosses" (p. 116).

In the first 6 years of life, good nutrition and the quality of intersubjective activity take on a transcendental significance for children to unfold their full potential in terms of health and cognitive and socio-emotional capacities (Young, 2002).

During this period, opportune biological conditions are produced for the acquisition and construction of capacities and abilities in different areas of development. From neuroscience, the most current research on the subject provides abundant evidence for the massive increase in plastic and malleable neural networks, which change and evolve in relation to family and school contexts (García & Juanes, 2013; Barrios-Tao, 2016).

From the cultural-historical perspective, child development is a process located and crossed by cultural contexts and products that mediate its construction. In this sense, the context ceases to be an incident variable and becomes an inherent variable in the development and learning processes: the cultural practices in which these processes are situated are the conditions for their realization (Castellaro, 2017; Moreno Zavaleta, 2020). Specifically, the macrocontext (economic, political, and social context) defines the nature and scope of social policies that directly influence the well-being of families and children; the microcontext, that is, the interactions between the child and his caregivers, mediated mainly by language, originate a guided development process, thanks to which the infant appropriates the culture of his environment. In other words, the intersubjective activity, both in upbringing and in school practices, configures modes of socially, culturally, and historically situated development.

The availability of programs, services, and policies directed at children, their caregivers, or both, affect the quality of these interactions and, therefore, the course of development in childhood (Vegas & Santibáñez, 2010). As Tuñón and Salvia (2011) have mentioned, child development requires having a set of favorable economic, social, and cultural factors that allow children to live fully in terms of the full deployment of their human capacities. It is the obligation of the State and society to take care of and attend to the material, formative, and emotional conditions of children, including respect for their person, their family, and their culture. Hence, it is essential to diagnose the situation of children regarding their development and expand access to quality interventions, especially in populations that are living under vulnerable conditions.

Population Studies of Child Development in Latin America and Argentina

As can be inferred from the above, child development constitutes a great challenge for the countries of Latin America. Concerning the cognitive, linguistic, socio-emotional and motor dimensions, large gaps are observed between social groups of different socioeconomic status. Currently, information regarding child development assessments in our region is very limited, generally resulting from specific studies

and not from systematic measurements. Additionally, it is mainly based on the areas of health and nutrition, with less knowledge about other areas such as cognitive and language development, socio-emotional and motor development of children under 6 years of age (Fiszbein et al., 2016).

One of the projects aimed at generating knowledge to promote public policies in the countries of the region is the Regional Program of Child Development Indicators (Engle et al., 2011), in which Costa Rica, Nicaragua, Paraguay, and Peru participate. It recognizes child development as a holistic and comprehensive process that brings together several interrelated dimensions including cognitive, language, emotional, health, social, motor skills, executive functioning, among others.

Within the framework of this program, new child development assessment instruments were created, built from items common to scales applied in the region (for example, Nelson Ortiz Pinilla's Abridged Scale, the Comprehensive Child Development Scale) and items found in recent international assessments. These instruments include the Engle Scale (Verdisco et al., 2009), valid and reliable for examining cognitive, linguistic, socio-emotional, and motor development, aimed at children between 24 and 59 months of age from the four countries. Among the main results, the existing inequality in child development for 24 months of age stands out: inequalities between countries, between populations within countries, and between dimensions of development. Particularly in the cognitive and language/communication dimensions, the gaps are evident from the early years and increase with age. Additionally, they indicate strong correlations of the mother's wealth and education index with the cognitive and language/communication dimensions. The home environment, which refers to indicators of family care, including the number of books per child in the home, the number of adults and the frequency with which they interact with the child, the routines implemented at home, and basic hygiene routines, appears with particular importance in all dimensions of child development (Verdisco et al., 2015).

With the same purpose of investigating the influence of home on the development of children, in Uruguay (López Bóo et al., 2019) some items of the subscales of Parental Response Capacity and Parental Sensitivity of the HOME inventory were implemented within the Survey of Nutrition, Child Development and Health (ENDIS) (Cabella et al., 2015). In this way, emotional aspects of the home environment were evaluated, and it was found that children from families with greater socioeconomic vulnerability are exposed to a lower quality environment (more punitive environments and with less capacity to respond to their needs). Additionally, it was found that the results obtained correlate with the level of child development.

For its part, to have an instrument of local value, Mexico has developed the Infant Development Assessment (EDI) test in 2013 (Instituto Nacional de Perinatología, 2013). It consists of a developmental screening for children under 5 years of age that assesses the areas of fine and gross motor skills, language, social, and adaptive skills. It returns the following possible outcomes:

1. Normal development (classified as "green"), that is, the child has reached the developmental milestones corresponding to their age group.

2. Developmental delay (classified as "yellow"), when the child has not reached the developmental milestones corresponding to its age group, but does meet the milestones of the previous age; there are no red flags and the neurological examination are normal.
3. Risk of delay (classified as "red"), the child has not reached the milestones of the age group to which it belongs or those of the immediate previous group, or because it presents an alteration in the neurological examination or has warning signs (Instituto Nacional de Perinatología, 2013).

In order to test validity and reliability, Rizzoli-Córdoba et al. (2014) conducted a cross-sectional study that included a total of 438 children from different regions of the country with and without risk of developmental delay (biological risk: $n = 197$, 45%), environmental risk ($n = 137$, 31.3%), and no risk ($n = 104$, 23.7%). They considered diagnostic tests, the Battelle Developmental Inventory-2 (Newborg, 2004) and Bayley-III (Bayley, 2006), finding that the EDI has adequate properties and similar to the tests most used in the USA (Rizzoli-Córdoba et al., 2013, 2014). Of the 438 participants, 41.3% ($n = 181$) obtained a normal result (green). The remainder had results indicating developmental delay (yellow) or alertness (red) (56% [$n = 144$] and the remaining 44% [$n = 113$] respectively). Among children with delay, 86.8% had at least one affected domain and 50% had three or more affected domains, compared with the group at risk (red), which presented 93.8% and 78.8% correspondingly, allowing the identification of different magnitudes of the problems and, consequently, promoting differentiated interventions (Rizzoli-Córdoba et al., 2014).

In Colombia, there is the Abbreviated Development Scale (EAD) (Ortiz Pinilla, 1999), an instrument nationally validated by the Colombian Ministry of Health and the United Nations Children's Fund (UNICEF), and standardized for its population. This scale has been updated and revised twice, the current iteration being the EAD-3 (PUJ Facultad Medicina, 2016). Its objective is to identify, early, the risk of delays in the development of Spanish-speaking Colombian children up to 7 years of age, through the areas of hearing-language, personal-social, and fine and gross motor skills. It allows the comparison of the guidelines approved by the child with a normative reference group being expected to pass through most of the items in their age range. Studies that used this scale in children under 5 years with associated risk factors (Castaño et al., 2019; Suárez Sanabria & García Paz, 2017) have found a high number of cases with development problems. Castaño et al. reported that 27.7% of the children evaluated (54 healthy children aged 1–5 years) presented a level of alertness in the global characteristics of psychomotor development, language being the area of development most affected (37%). Similar results are those expressed by Suárez Sanabria and García Paz (2017), who evaluated 60 children under 5 years of age with malnutrition, finding a prevalence of the risk of delay of 38.3%.

In Chile, starting in the 1990s, the evaluation of psychosocial development was incorporated into pediatric control through the implementation of a program to stimulate and evaluate psychomotor development in children under 6 years of age,

which used standardized instruments and a scale of clinical screening: the Brief Guideline for Development Assessment and Psychomotor Development Assessment Scale (EEDP) (Rodríguez et al., 1976) for children under 2 years of age and the Psychomotor Development Test (TEPSI) (Haeussler & Marchant, 2003) for children between 2 and 5 years of age (Bedregal, 2008). During 2007, they started the child protection program "Chile Grows with You," which aimed to offer the child population an integrated system of interventions and social services that support the biopsychosocial development of children and their families, from pregnancy to their schooling, to reduce inequities (Bedregal et al., 2016). In a study where the results of evaluations of psychomotor development within the framework of the program are exposed, between 2008 and 2011 (Atalah et al., 2014), they found a 5% prevalence of developmental delay or risk in children. The children evaluated had a recovery rate close to 50% and there was a slight increase in the prevalence of lag in children under 2 years of age (0.6%). In the period reported, the average number of children under 3 years of age controlled by the program was 505,471 (67.4% of the Chilean population of that age), which corresponds to the annual application of about 350,000 tests to assess psychomotor development.

In 2006, Argentina added a specific module to the Social Debt Survey (EDSA) with the aim of evaluating the level of compliance with the rights of the child, as well as the social and human development of children and adolescents (Tuñon & Fourcade, 2019). This survey was designed to collect data on households and individuals in the most significant urban conglomerates in the country.[1] In the case of the module for childhood, the mother, father, or guardian of children from 0 to 17 years old who live in the home answered the questions. Tuñon (2018) presented the results obtained for children from 0 to 12 years old, whose families participated in the EDSA in 2017. Indicators of emotional, social, and intellectual stimulation were analyzed as a way of approaching child development through the characteristics of their parenting and socialization context. The seven indicators included were:

1. Sharing of a bed or mattress.
2. Sharing of stories and/or oral histories as a family.
3. Presence of children's books in the home.
4. Birthday celebrations.
5. Parenting styles (homes in which physical, verbal aggression or penance is used to discipline).
6. Access to extracurricular sports activities.
7. Access to extracurricular artistic activities.

Among the most relevant results, it was found that 4 out of 10 children are not usually told oral stories and that this percentage increases as the children grow older. Furthermore, when the child belongs to families of the marginal working stratum,

[1] Metropolitan Area of Gran Buenos Aires, Gran Córdoba, Gran Rosario, Gran Mendoza y San Rafael, Gran Salta, Gran Tucumán y Tafí Viejo, Mar del Plata, Gran Paraná, Gran San Juan, Gran Resistencia, Neuquén-Plottier, Zárate, Goya, La Rioja, Comodoro Rivadavia, Ushuaia, and Río Grande.

they are twice as likely not to be a recipient of oral histories than a peer in the middle professional stratum. Regarding the deficit of books at home, it affects 40% of children and the percentage is higher in children and boys. The inequality gap with respect to this indicator increases up to six times when the child belongs to the marginal worker stratum. The absence of a birthday celebration affects 17% of children with a regressive inequality gap of nine times for children from the most vulnerable sector. Regarding extracurricular socialization activities, the 2017 measurement showed that 60% of children and adolescents between 5 and 17 years old do not practice sports or physical activity outside school, whereas in the case of artistic activities, this percentage grows to 85%.

Also in Argentina, Horacio Lejarraga and collaborators conducted various studies on child development in vulnerable populations in different areas of the Buenos Aires metropolitan area (AMBA).[2] Part of these studies consisted of creating and validating, in our country, the National Research Test (PRUNAPE, acronym in Spanish of *Prueba Nacional de Pesquisa*) developed by Lejarraga et al. (Jumbo Salazar et al., 2021; Lejarraga et al., 2013, 2018b) that conceives the development process as the course of changes in sensory-motor behavior, emotional response, intelligence, language, and learning. It is a screening or research instrument that allows identification of the presence of risk in psychomotor development from 0 to 6 years of age. The instrument assesses 78 development guidelines grouped and ordered into four areas: personal-social (PS), fine motor skills (MF), language (L), and gross motor skills (MG), based on the increasing compliance with the guidelines as they advance in chronological age. The items are differentiated according to whether they are type A or B guidelines and are determined according to the chronological age of the children evaluated; all the B guidelines and three guidelines must be evaluated in each area. Type A patterns are those that exceeded the normative sample by 90%, whereas type B guidelines are between the 75 and 90 percentiles. Therefore, noncompliance with a type A guideline is always at a higher risk than noncompliance with a type B guideline. Any child who passes all type A guidelines or who fails only one type B guideline is classified as normal. Otherwise, the child is classified as at risk.

During the period 2004–2005, a study was carried out in three health centers in the town of San Isidro, belonging to the AMBA, which served populations from different socioeconomic contexts (Lejarraga et al., 2008). Two of them served communities in the center of the locality where either the level of unemployment was high (Center A), or the families had more stable jobs but had a low income (Center B). The third center (C) served the middle-class population. In each center, the first five children who attended on a particular day of the week were selected and who met the two inclusion criteria: being under 6 years of age and having no chronic or acute diseases. The participating children were evaluated through PRUNAPE and

[2] **Metropolitan Area of Buenos Aires (AMBA):** is the common urban area that makes up the Autonomous City of Buenos Aires (CABA) and 40 municipalities of the Province of Buenos Aires, including La Plata, Berisso, and Ensenada, which make up in turn the urban conglomerate "Gran La Plata."

those who did not pass the test were referred to the San Isidro Maternal and Child Hospital where a multidisciplinary team was made available to conduct in-depth developmental evaluations and offer diagnosis and follow-up. Among the most relevant results, the authors found a high prevalence of children who did not pass the test (20%; 24% Center A, 19% Center B, and 16% Center C). Furthermore, a significant percentage of children either did not attend or did not complete the diagnostic process when they were referred to the Maternal and Child Hospital (43%). When exploring the socioeconomic characteristics of those families that did not complete the diagnostic process, the authors found a higher prevalence of high-risk families (families in vulnerable situations). Alternatively, among the children who were referred to the hospital and completed the process, the diagnosis of global developmental disorder was predominantly found. Finally, four risk factors for development were identified (risk of failing the PRUNAPE): the mother's educational level, male gender, pregnancies with complications, and the age of the child (the older the child, the higher the risk).

Lejarraga and his group of researchers (2014) also participated in the implementation of a series of surveys conducted from 2010 on families with unsatisfied basic needs in the region known as Cuenca Matanza Riachuelo and in the town of Florencio Varela (both belonging to the AMBA). Through these, it was sought to evaluate, among other aspects, the risk of suffering inapparent developmental problems in children under 6 years of age and to be able to identify determinants associated with said risk. The 7844 participating children were evaluated either through a selection of 13 PRUNAPE guidelines, or through the PRUNAPE Pre-Screening Questionnaire (CPPP), which consists of a series of questions that the mother or caregiver must answer about the skills that PRUNAPE investigates. The analysis of the results obtained allowed us to find a high proportion of children at risk of developmental problems (34.8%) and a higher prevalence in males. Likewise, the results showed a marked delay in development and a progressive trend of this delay until the age of 4 years. Strong relationships were found with birth weight, gestation duration, and the mother's literacy skills in terms of possible risk determinants (Lejarraga et al., 2014).

In 2018, based on Gesell's (Ames, 1940) concept of "developmental tempo" (the speed at which a child achieves one pattern after another), Lejarraga et al. (2018a) analyzed the data obtained in the previous study to describe these "tempos" when environmental conditions are unfavorable. The analysis allowed three phases to be identified: a first phase between birth and 270 days with normal development, in which the median age of compliance with the guidelines was like that of the national reference; a second phase of progressive developmental delay; and the third recovery phase from 1260 days. Lejarraga attributed the normal development time during the first year of life to maternal care, which appears to constitute protective factors. After the first year, maternal and family care is not enough to protect the child from unfavorable environmental factors, which would explain why a slower maturation time appears in the second phase. The recovery that characterizes the third phase is associated, according to the authors, with the attendance of children from 4 years of age at kindergarten or care centers (Lejarraga et al., 2018a).

Another of the lines of research that address the issue of vulnerability and child cognitive development in Argentina is that of the works of Lipina and collaborators. Recently, they have investigated the influence of poverty on child development, analyzing its effects and relationship with alterations in the growth and development of different cognitive skills (Lipina, 2008). From this perspective, they propose studying the influence of poverty on cognitive development using a comprehensive and multidisciplinary approach (Lipina, 2017). Concerning studies with local children in this group, some of their most outstanding current works are described below.

In 2017, Prats et al. conducted a cross-sectional study to evaluate the relationship between children's cognitive performance in different tasks and various individual and contextual factors. With this objective, they evaluated 46 children aged 5 years from homes with unsatisfied basic needs (UBNs), with no history of developmental disorder, concurrently with a public kindergarten in the La Boca neighborhood of the Ciudad Autónoma de Buenos Aires (CABA). They administered the following instruments:

Session 1. (a) Expressive vocabulary (K-BIT), which assesses processes of verbal intelligence (Kaufman & Kaufman, 1983); (b) Heart-flower stroke, which assesses cognitive flexibility, inhibitory control (Davidson et al., 2006); (c) K-ABC Digit Repetition Sub-Test, which evaluates working memory (Kaufman & Kaufman, 2002).

Session 2. (d) Matrices (K-Bit), which evaluate fluid thinking (Kaufman & Kaufman, 1983).

Session 3. (e) Attention network test (ANT), which evaluates attentional processes (Rueda et al., 2004); (f) Corsi blocks, which assess spatial working memory (Pickering, 2001).

For individual factors, they took a saliva sample to measure cortisol and measured EEG activity; they also conducted an interview with mothers and observed a game situation (parenting practices and language complexity). For contextual subjects, they considered insufficient income, based on the concept of UBN. Among the main results, they found that the factors with the greatest association with cognitive performance were neural connectivity/power and the mother tongue. The findings of this study are in connection with those found in the literature on the subject.

In line with this work, Hermida et al. (2019) conducted a comparative study between two groups of children with UBN, a group from a rural context and another from an urban context. A total of 131 participating children, attending two public schools in Buenos Aires and two public schools in Santiago del Estero, were evaluated at age 5 with cognitive tasks and individual and environmental variables. In this way, they investigated how poverty and rural or urban environments affect children's cognitive performance. For the same level of UBN, children from rural settings performed worse than those from urban settings. Such differences could be mainly attributed to the months of preschool attendance and the complete level of parental education. As in the aforementioned work, the authors point out that the results obtained indicate that they should promote policies and programs for

children living in rural poverty throughout the world, and especially in Latin America (Hermida et al., 2019; Prats et al., 2017).

In 2017, the Facultad Latinoamericana de Ciencias Sociales (FLACSO), conducted an assessment of the effects of the Centros de Primera Infancia Program (Early Childhood Centers) that operate in CABA and created in 2009 by civil society organizations meeting with the Ministerio de Desarrollo Humano y Hábitat (Ministry of Human Development and Habitat) of Buenos Aires City. It consists of 76 centers serving children from 45 days to 4 years of age providing food and educational service in 8-h days. The study was conducted on 456 children aged 3 years and included, among other variables, the developmental assessment using the Battelle 2 test (Newborg, 2004). From the 13 centers selected for the show, six were in vulnerable neighborhoods attended exclusively by children living there and seven were in more heterogeneous neighborhoods, although the children attending were from families living under conditions of significant social vulnerability. Among the most relevant results regarding developmental assessment, one in four children were found to have a risk of developmental delay. The area where the greatest risk was found was cognitive, whereas the adaptive area had the lowest frequency of at-risk cases. Analyzing the presence of factors associated with better development scores, it was found that attendance time at centers for more than 1 year involved improvements in all areas of development evaluated. Other factors associated with better scores were the educational level of the parents and the parenting style. In contrast, factors identified as higher developmental risk partners were male life, attending centers in vulnerable neighborhoods, living in overcrowded conditions, having moved three times in the past 3 years, preterm birth, hospital stays of at least 15 days, and the presence of postpartum mother depression (Fondo de las Naciones Unidas para la Infancia, 2019).

Most Popular Child Development Assessment Tools in Latin America

The child development assessment is normally aimed at investigating the presence or absence of risk. Individually, if a risk is detected, a psychological examination will be deepened with specific tests, and it will be decided whether a professional intervention is necessary (Castro Solano, 2017). At the population level, it will allow information to be used to design and implement actions aimed at promoting development, especially for children at socioeconomic disadvantage. Thus, the evaluation and monitoring of development in the first years of life consist of:

1. Developmental monitoring corresponds to systematic observations of children conducted by professionals, during health control, and encompasses all activities related to the promotion of normal development and the detection of developmental problems in primary health care.

2. Screening is a tool that identifies children at risk in their development in a supposedly healthy population.
3. Developmental assessment is a more detailed investigation of children with suspected developmental problems (Vericat & Orden, 2010).

To conduct these actions there are different techniques and methods, such as surveys of parents or caregivers, direct observation of the child, screening tests, and developmental scales.

Table 4.1 shows a register of early childhood development assessment tools created or adapted in Latin America. From the bibliographic study performed and presented in the previous section, it has been possible to select those tests that, by their characteristics, are suitable, effective, and suitable for the regional and local populations, both for research activities and for professional practice.

Findings and Contributions from Our Line of Research

The study on child growth and development at the local level was opened with the "Estrategias de Alimentación, Crianza y Desarrollo Infantil (Child feeding, parenting, and development strategies)" project carried out during 1986–1989, with financial support from Canada's International Development Research Center (IDRC), the Scientific Research Commission of Buenos Aires, Argentina, and UNICEF's technical and financial assistance. This project focused on the research of the characteristics of families living in settlements in Gran La Plata and Gran Buenos Aires, under the hypothesis that poverty did not shape a homogeneous condition, with differences linked to the psychological development and nutritional status of children from 0 to 5 years (Piacente et al., 1990).

This research, which was pioneering in the area and in the region, opened up a line of investigation that continued years later with the impact assessment of the *Plan más Vida*,[3] by the Scientific Research Commission of Buenos Aires. This evaluation consisted of the administration of a series of surveys and psychological tests by cross-sections of representative samples of families in the suburbs of Buenos Aires, aimed at examining food, nutrition, upbringing, child psychological development, and literacy (CIC, 2008). Against this background, in 2017 the project "Infancia y derechos sociales. Condiciones de vida, cuidados, estado nutricional y desarrollo infantil en el Gran La Plata"[4] had the objective of assessing the

[3] Food program under the Ministerio de Desarrollo Social (Ministry of Social Development) of the Government of the province of Buenos Aires. Its objective is to ensure the basic feeding of the living-child population at risk through the nutritional reinforcement of pregnant women and children.

[4] Oriented Research Project, Consejo Nacional de Investigaciones Científicas y Técnicas – CONICET (National Council for Scientific and Technical Research) and Comisión de Investigaciones Científicas – CIC (Scientific Research Commission of Buenos Aires). Directora: Dr. Susana Ortale; Codirector: Mg. Javier Santos.

Table 4.1 Development Assessment Instruments developed or adapted in Latin America

Name	Authors/year/country of origin	Age range	Sources of information	Areas it evaluates	Validity
Escala Abreviada de desarrollo	Ortiz Pinilla/1999/Colombia	0–72 months	Child observation	Gross motor skills, fine adaptive motor skills, language, personal-social	ND
Cumanin cuestionario de madurez neuropsicológica	Portellano et al./2000/Spain, adaptation for Mexico by Uribe Ferrari (2009)	36–70 months	Child observation	Psychomotor skills, articulated language, sympathetic language, expressive language, spatial structuring, rhythm, visual perception and iconic memory	ND
Escala Argentina de Inteligencia Sensorio motriz (EAIS)	Oiberman et al./2002/Argentina	6–24 months	Child observation	Cognitive development	S: 0.80 E: 0.93
Battelle development inventory (BDI)	Newborg/2004/USA	0–96 months	Child observation and parental report	Social, adaptive, motor, communication, and congenital development	S: 0.72–0.93 E: 0.79–0.88
Cognitive Adaptative Test/ Clinical Linguistic and Auditory Milestone Scale (CAT/CLAMS)	Accardo and Capute/2005/USA	1–36 months	Child observation	Language, fine, and visual motor skills	Bajo Riesgo S: 0.21–0.67 E: 0.95–1.00 Alto Riesgo S: 0.05–0.88 E: 0.82–0.98
Bayley scale for child development (BSID III)	Bayley/2006/USA	1–42 months	Child observation and parental report	Mental scale: sensory-perceptive acuity, discrimination and responsiveness to stimuli, object permanence, memory, learning and problem-solving, verbal communication. Psychomotor scale: body control, coordination and manipulative skill of hands and feet	S: 0.75–0.86 E: 0.75–0.86
Denver Screening Scale (DDST-2)	Frankenburg et al./2003/USA; Himmel/1994/Chile	3–60 months	Child observation	Language, gross motor skills, fine motor skills, social-adaptive	S: 0.56–0.83 E: 0.43–0.80

Ages and Stages Questionnaires (ASQ-3)	Squires et al./2009/USA (Spanish version 2009)	1–66 months	Parental report	Communication, fine motor skills, gross motor skills, problem solving, and interpersonal relationships	S: 0.86 E: 0.85
Escala de desarrollo integral del niño (EDIN)	Unidad Nacional de CEN-CINAI, Unidad de Investigación y Vigilancia del Crecimiento y Desarrollo/2013/Costa Rica	0–70 months	Child observation	Reflections, gross motor skills, fine motor skills, cognitive, language, emotional partner, and habits	ND
Escala de Desarrollo Integral (EDI)	Instituto Nacional de Perinatología/2013/Mexico	0–60 months	Child observation and parental report	Biological risk factors; warning signs; areas of development, in this test are grouped into: fine motor skills, gross motor skills, language, social and knowledge; neurological examination; and alarm signals	S: 0.81 E:0.61
Test de Desarrollo Psicomotor TEPSI (Chile)	Haeussler and Marchant/2003/Chile	24–60 months	Child observation	Motor skills, coordination, and language	ND
Test de Aprendizaje y Desarrollo Infantil (TADI)	Edwards and Pardo/2013/Chile	3–72 months	Child observation	Motor skills, language, cognition, and socio-emotional	ND
Prueba nacional de pesquisa PRUNAPE	Lejarraga et al./2013/Argentina	0–60 months	Child observation and parental report	Personal-social, end-to-end motor skills, language, and gross motor skills	S: 0.80 E: 0.93
Instrumento de observación del desarrollo infantil (IODI)	Ministerio de Salud de la República Argentina (2017)	0–36 months	Child observation and parental report	Socio-emotional; communication; motor; visuomotor and cognitive coordination	ND
Screening Neuropsicológico para Niños (SNN-UBA)	Castro Solano and D'Anna/2017/Argentina	60–108 months (5–9 years)	Child observation	Neuropsychological and cognitive functions	ND

S sensitivity, *E* specificity, *ND* not determined

conditions of domestic and extra-domestic care in children attending the initial level of public schools of Gran La Plata and evaluating their nutritional status and psychological development.

The results set out here correspond to one of the studies of the project, more specifically that dedicated to describing and analyzing the psychomotor and socio-emotional development of 5-year-olds of the Gran La Plata. Two sources of information were used: the direct evaluation and observation of children and the parent survey. It was also proposed to relate the results obtained from these sources to family practices reported by caregivers. The interest of this work lies in the importance of having an up-to-date diagnosis of child development in the Gran La Plata because, first, it is considered an essential dimension for approaching the child welfare index and an indicator of the quality of life of children from the perspective of human rights (Brooks & Hanafin, 2005; Colacce & Tenenbaum, 2018); second, the scarcity of such studies at the local level. This diagnosis is essential to ensure that all children have access to quality early childhood development care and preschool education, so that they are prepared for primary education (UNESCO, 2019).

Our research involved 728 children and their families concurrent with the last initial public education level of the Gran La Plata. The distribution of the participants according to the locality of residence of the kindergarten respected the current census information, being formed as follows: 35 from Ensenada, 77 from Berisso, and 616 from La Plata. It should be clarified that the population who attends these educational institutions is of low average and low socioeconomic status. It was observed that the participating children had a chronological age of less than 6 years (*mean* = 65.5, SD = 3.53) and did not present apparent alterations in development, whereas the research used allows risk to be detected in a presumably healthy population.

To assess psychomotor development, the PRUNAPE (Lejarraga et al., 2013) was used. To examine socio-emotional development, we used the Ages & Stages Questionnaires: Socio-Emotional Second Edition (ASQ: SE 2) (Squires et al., 2015). The questionnaire for parents was attached to the "Encuesta sobre Condiciones de Cuidado y Crianza" ("Survey on Care and Parenting Conditions"), developed for this project to inquire about household data, as well as knowledge and practices related to food, health, child development, and childcare.

In the case of the PRUNAPE, between 12 and 16 items were evaluated. The items considered for the ages studied are presented in Table 4.2. Compliance with the guidelines qualifies the development of children as "normal" or "at risk." It should be clarified that the test is a screening, so it does not thoroughly explore each component of development and does not produce diagnostic categories. The administration of PRUNAPE consisted of an individual session of approximately 20 min, held in the school establishments that collaborated in the study. The results were personally returned to parents and in cases detected as being "at risk," an offer was made to replicate and deepen the evaluation.

On the other hand, ASQ:SE 2 is a screening of American origin, adapted into Spanish. It consists of nine multiple choice questionnaires to complete per parent or

Table 4.2 PRUNAPE items for 5-year-olds

Area	Type A guidelines	Type B guidelines
Personal-social	Put on clothes or shoes	Collect similar drawings
	Puzzle weapon	
	Pair colors	
Fine motor skills	Draw a three-part person	Draw a six-part person
	Fold a piece of paper diagonally	Copy a triangle
	Copy a cross	
Language	Follows two consecutive directions	Recognize three colors
		Use two objects
		Know why It is day or night
Gross motor skills	Stands on one foot for 5 s	Walk heel to toe
	Wide jumps on one foot	Heel to toe back

primary caregiver of the child, which examines the socio-emotional development of 1–72 months of age. The questions that make up these questionnaires address seven areas:

1. Self-regulation (calming down, reassuring, or adjusting to psychological or environmental conditions).
2. Compliance (obeying orders and complying with instructions given by others).
3. Adaptive operation (dealing with needs such as sleeping, eating, going to the bathroom, etc.).
4. Autonomy (initiating some action by itself or responding to others without instructions).
5. Affection (showing your own feelings and empathy for others).
6. Communication (responding to or initiating verbal or nonverbal signals indicating feelings, affections, or internal states).
7. Interaction with persons (responding to or initiating social responses to parents, other adults or peers).

The scores obtained are added up and the total is compared with a cut-off point set by age. This cut-off point delimits qualitative categories:

1. Below the cut-off point, socio-emotional development is within expectations.
2. Close to the cut-off point, the child requires additional monitoring and follow-up actions.
3. Above the cut-off point, is at risk, requires a more thorough evaluation and eventually, an intervention.

In this study, it was decided to work with dichotomic categories, grouping the 2 and 3: “within what is expected” and “should be observed and/or thoroughly evaluated.”

Psychomotor and Socio-Emotional Development

The administration of the PRUNAPE in the Gran La Plata yielded the following results: 72.1% of participants achieved the expected psychomotor development guidelines for age, whereas 27.9% did not, ranking in the risk category. Children identified as being at risk had a higher number of faults in the language areas (33.8%) and the fine motor skills (23.1%) (Fig. 4.1), particularly in type A guidelines, i.e., those that are approved by more than 90% of the population of that age range: "use two objects" and "fold a piece paper diagonally," respectively.

As for the results obtained from the administration of ASQ:SE 2, it was found that in the Gran La Plata 77.2% of caregivers report child behaviors that place children within what is expected in socio-emotional development, whereas 22.8% manifest the presence of socio-emotional behaviors that require monitoring and/or thorough evaluation. This percentage is lower than that reported by the authors of the questionnaire (Squires et al., 2015): from the normative sample 31.1% were placed in the at-risk category.

Comparing the overall results of both tests (N728), of children passing the PRUNAPE (72.1%), 78% get an outcome within what is expected and 22% require follow-up in socio-emotional development. These proportions are maintained among those who do not pass the PRUNAPE (Table 4.3).

Factors Associated with Psychomotor and Socio-Emotional Development

The associations between the qualitative categories of PRUNAPE (normal to at risk) and ASQ: SE 2 (within expected to observe/consult) and the variables "gender," "maternal education level," "family practices with children," "characteristics

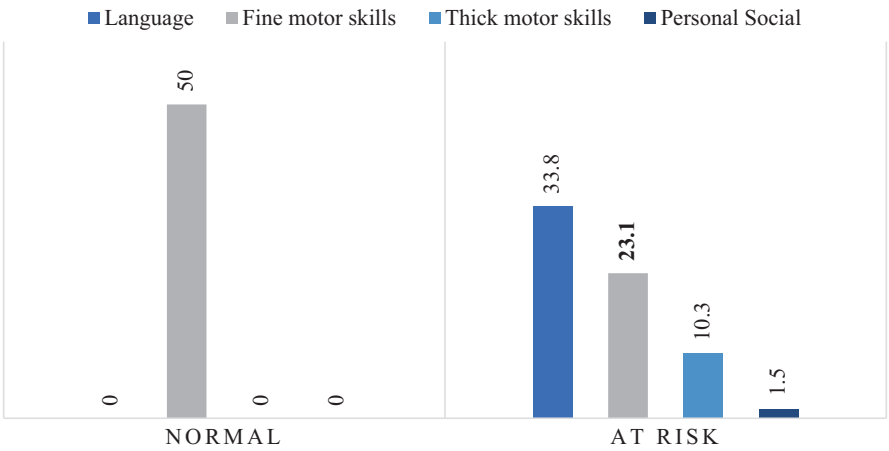

Fig. 4.1 Most affected psychomotor development areas

Table 4.3 ASQ SE and PRUNAPE results

		ASQ SE		
		Expected	Observed/consult	Total
PRUNAPE	Passing	410 (78%)	115 (22%)	525
	At risk	150 (74%)	53 (26%)	203
Total		560	168	728

Table 4.4 Gender: psychomotor development and socio-emotional development

	Psychomotor development		Socioemotional development	
Gender	Passing	At risk	Expected	Observed/consult
Boys	64.6%	35.4%	74.8%	25.2%
Girls	80.2%	19.8%	79.7%	20.3%
X^2	22.070*		2.568	

*$p < 0.001$

Table 4.5 Percentage of children in the PRUNAPE and ASQ categories according to maternal education level

	Psychomotor development		Socio-emotional development	
Years of maternal schooling	Passing	At risk	Expected	Observed/consult
Up to 6 years	61.3%	38.7%	73.8%	26.2%
Up to 15 years (incomplete tertiary)	73.8%	26.2%	77.6%	22.4%
More than 16 years	81.5%	18.5%	92.6%	7.4%
X^2	9.451		4.64	
Phi	0.132		0.089	

of children," and "family concerns regarding the development of the child" were analyzed.

1. *Gender and psychomotor/socio-emotional development.* Differences in child development were observed according to gender, being significantly in favor of girls in psychomotor development (Table 4.4).
2. *Maternal education level and psychomotor/socio-emotional development.* The maternal educational level has been used as a proxy variable of the socioeconomic level of families, a variable widely used in Argentina and in the region (General Directorate of Statistics and Censuses [DGEyC], 2017). It is noted that as the years of maternal education increase, the percentages of children at risk decrease, with a noticeable positive difference being made for the children of mothers with an education over 16 years of age (Table 4.5).
3. *Family practices with children and psychomotor/socio-emotional development.* From the data collected in the family surveys, composite variables were developed that refer to different practices of caregivers with children. These practices were categorized into appropriate/inadequate, according to their presence and how often they are performed (Table 4.6).

Table 4.6 Family practices/child knowledge, psychomotor development and socio-emotional development

Family practices		Psychomotor development			Socio-emotional development		
		Passing (%)	At risk (%)	X^2	At expected (%)	Observe/ consult (%)	X^2
Promoting development	Appropriate	66.4	33.6	2.008	77.0	23.0	6.800
	Inadequate	72.3	27.7	$p = 0.554$	82.2	17.3	$p = 0.079$
Literacy context	Appropriate	69.2	30.8	0.039	78.6	21.4	0.446
	Inadequate	70.1	29.2	$p = 0.844$	75.7	24.3	$p = 0.504$
Pre-reader knowledge	Appropriate	83.8	16.3	9.447	87.7	12.3	5.574
	Inadequate	66.2	33.8	$p = 0.002$*	75.6	24.4	$p = 0.018$*
Motivation to read	Appropriate	72.7	27.3	2.857	83.3	16.7	10.233
	Inadequate	65	35	$p = 0.091$	70.3	29.7	$p = 0.001$***
Socialization	Appropriate	65	35	7.113	70.3	29.7	5.720
	Inadequate	65.9	34.1	$p = 0.008$*	75.1	24.9	$p = 0.017$*
Play	Appropriate	70.9	20.1	2.330	79.9	20.1	7.132
	Inadequate	61.0	39.0	$p = 0.127$	64.4	35.6	$p = 0.008$**

*$p \leq 0.05$
**$p \leq 0.01$
***$p \leq 0.001$

Concerning family development promotion practices, they were considered appropriate when performing three or four of the following activities: singing songs, playing with the child, telling the child stories, reading stories to the child, offering pencil and paper and other materials, taking the child for a walk, and offering the child children's books, provided that present among them was "play with the child." Of the total practices reported, 49% were adequate and 51% were inadequate. In terms of psychomotor development, among families reporting appropriate development promotion practices, 66.4% passed the psychomotor development assessment and 77% obtained results within what is expected for ASQ: SE 2.

For the *home literacy context*, the following practices were particularly considered: reading stories, offering pencil and paper, and children's books. Just over two-thirds (67.8%) of the parents reported adequate practices. There were no significant differences between children who qualify as being at risk and those who do not, in relation to literacy practices reported by parents.

4. *Characteristics of children and psychomotor/socio-emotional development*. Children's characteristics include the variables "pre-reading knowledge," "motivation for reading," "socialization," an×d "play."

The association between the pre-reading knowledge (for example, recognizing some letters, reading familiar words, distinguishing letters from numbers), and psychomotor development was significant ($\times^2 = 9.95$, $p = 0.002$). In Table 4.6, it can be seen that children with knowledge and pre-reading practices suitable for

Table 4.7 Family concerns and development

		Psychomotor development			Socio-emotional development		
		Passing (%)	At risk (%)	X^2	As expected (%)	Observe/ consult (%)	X^2
Worried about any problems with your child's development?	Yes	62	38.0	6.25	60.9	39.1	20.89
	No	74.1	25.9	$p = 0.001$	80.6	19.4	$p = 0.00$

Table 4.8 Caregivers' concerns about their children's development

		PRUNAPE		ASQ	
		Passing (%)	At risk (%)	Expected (%)	Observe/ consult (%)
Are you concerned about your child's habits regarding eating, going to the bathroom, or sleeping?	Yes	65.0	35.0	62.2	37.8
	No	73.3	26.7	80.3	19.7
	Ns/Nc	64.8	35.2	70.8	29.2
Do you think your child is achieving age-appropriate developmental guidelines?	Yes	73.2	26.8	78.8	21.2
	No	60.0	40.0	69.2	30.8
	Ns/Nc	64.8	35.2	–	–
Are you worried about any problems with your child's development?	Yes	62.7	37.3	60.9	39.1
	No	74.0	26.0	80.6	19.4
	Ns/Nc	64.8	35.2	–	–
Did you make any inquiries about this development issue?	Yes	62.5	37.5	63.7	36.3
	No	63.6	36.4	47.4	52.6
	Ns/Nc	74.9	25.1	81.0	19.0

their school level (83%) also had psychomotor development suitable for their chronological age.

Among children with suspected risk in their psychomotor development, 33.8% of the pre-reading knowledge was inadequate. Moreover, the four variables included in the "Child Characteristics" dimension were significantly associated with socio-emotional development. Among children who were within what is expected in socio-emotional and psychomotor development, the families carried out greater appropriate play and socialization activities.

5. *Family concerns and psychomotor/socio-emotional development.* Most of the families who answered the survey did not express concern about the development of their children (85%). In these cases, where parents were not concerned, 25% did not pass the PRUNAPE. Regarding socio-emotional development, it was noted that for families who did not express concerns about development, 19.4% were not within what is expected, whereas for those whose parents were concerned, 39% should have had a follow up (Table 4.7).

Table 4.8 presents the percentages of parents reporting concerns about their children's habits and development, based on the results obtained in the different

assessments. It should be clarified that of all the responses from parents who claim to be concerned, 47% refer to developmental problems, 21.8% to developmental delays, and the remaining 15.9% to habits (absence or presence of inappropriate habits).

Final Considerations and Perspective

This chapter presented a powerful overview of population child development studies in Latin America and the metropolitan area of Buenos Aires (Argentina), particularly for children with social vulnerability. This review has delved into our own research, which has been carried out in recent years.

The information reported by the literature consulted provides empirical evidence about the at-risk situation that is recorded very early in the psychological development of children. However, the situation is not the same in the various Latin American countries and between populations within each country: the percentages of children at risk with regard to development vary within a range of 20–40%. Concerning developmental dimensions, the research agrees to point to language as the most affected area of child development.

Another highlight of the bibliographic review is the elaboration of a register of child development assessment tools used in Latin America. This list provides information about up-to-date tests that, because of their characteristics, are suitable, effective, and appropriate for the regional and local population, both for research activities and for professional practice.

As for our research, coinciding with the range reported by Latin American studies, it has been observed that 27.9% of the children evaluated are at risk regarding psychomotor development and 22.8% regarding socio-emotional development. These percentages are similar to the proportions reported by the studies by Lejarraga and collaborators (2014, 2018a) with children of 0–6 years of age carried out in primary care facilities in different locations of the Buenos Aires suburbs and CABA, which show that between 20% and 35% of the population has developmental disorders (SAP, 2016). However, it should be emphasized that the percentages found in our study are close to the upper limit of that range.

The area that has been recorded as the most sensitive to risk in childhood development has been language. This is consistent with regional findings that mention language and cognition as the dimensions most affected by social vulnerability (Verdisco et al., 2015).

As for the results in the PRUNAPE and ASQ:SE 2, in addition to the discrepancies recorded in the at-risk percentages, the subjects who were at risk were not the same in both tests: of the group of children who did not pass the PRUNAPE, 26% also did not pass ASQ:SE 2.

This is possibly linked, first, to the assessment of diverse psychological constructs, so that risk in psychomotor development does not pose a risk in

socio-emotional development and vice versa. Second, it could be because the latter instrument is a questionnaire for caregivers, which requires certain parental skills to observe, perceive, and identify behaviors that indicate developmental delays or alterations early. This is in continuity with the low percentage of caregivers (15%) that raises concerns about the development of their children.

In line with what has been reported in previous research carried out in other regions of the AMBA (Lejarraga et al., 2008; UNICEF, 2019), the child's male gender appears to be associated with an increased risk of developmental problems. Similarly, our study shows that as the mother's educational level increases, there is a significant decrease in the percentage of children at risk of developing developmental problems. This coincides with the findings of the two studies mentioned, as well as the Regional Programme of Child Development Indicators (Engle et al., 2011).

On the other hand, it was recorded that psychomotor development and socio-emotional development correlate significantly with child characteristics such as the presence of pre-reading knowledge, motivation for reading, socialization, and play with other children. Not so with family practices promoting development and literacy, as reported by the Regional Programme of Child Development Indicators (Engle et al., 2011; Verdisco et al., 2015) and Uruguayan studies (López Bóo et al., 2019). After analyzing these results, it is possible to suggest that in the ages under study in our research, which correspond to the last year of preschool, the factors linked to school contexts have a greater impact on children's development than family factors.

We believe that a considerable contribution from our study is the fact that it delivers results obtained both from a specific developmental test administered to children and from parental reporting tools that consider contextual factors, which greatly enriches the evaluations carried out. In this sense, it is necessary to recall the importance of multi-forming child evaluation, i.e., include different sources such as information given by the child's parents, caregivers, and observers; multicontext, taking into account how different contexts assume different roles and influence child behavior; multitechnical and multimethod, i.e., that the approach to the psychology of the child is through different techniques that respond to different levels of inference (Castro Solano, 2017).

Finally, it should be noted that studies of child development in our region, including our own, have so far been cross-cutting, given the difficulties involved in longitudinal studies at the population level in unfavorable contexts. We agree with Lejarraga et al. (2018a) on the importance of starting to implement longitudinal research to confirm the incidence of protective factors for child development, such as assistance to schools and care, which are detached from the studies carried out so far.

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Chapter 5
Parental Appraisal of the Vocabulary of Mexican Infants from Families of Different Socioeconomic Status

Paloma Suárez Brito and Elda Alicia Alva Canto

Introduction

The presence of individual differences in the study of development is undeniable, family context and socioeconomic status (SES) being the most notable variables in which this can be observed. In studies on vocabulary development, it is known that preschoolers from lower SES families performed significantly lower than preschoolers from higher SES families on different language components, and that children whose primary caregivers had only a few years of education showed the lowest scores on those components. It has been specifically found that when the mother's level of schooling is lower than high school, the infant shows a set of effects such as reduced expressive language, social and behavioral problems, deficits in social interaction, and delays in reading skills, among other difficulties (e.g., Pace et al., 2017).

Results showing that SES differences in verbal abilities are evident in the preschool years suggest that these disparities might begin to develop in the first years of life, setting children on particular trajectories with far-reaching consequences for later academic success. Until recently, measures available for assessing language and cognitive proficiency in children younger than 3 years have not been high in predictive validity, limiting their effectiveness in linking characteristics in infancy to long-term outcomes. The aim of this work was to establish criteria for parental estimation of language development in 1302 infants from 12 to 30 months of age, living in Mexico City, using the Inventory of Understanding and Production of Language in Mexican Infants (ICPLIM; *Mexican Infants' Language Comprehension and Production Inventory*). Variables of age and gender of the infant and

P. Suárez Brito (✉) · E. A. Alva Canto
Faculty of Psychology, National Autonomous University of Mexico, Mexico City, Mexico
e-mail: alva@unam.mx

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educational level of the mother were considered, as well as comprehension and word production measures. In addition to revealing the convergent and content validity of the ICPLIM, the main results showed an effect of the mother's educational level on the estimated vocabulary of the infants, specifically among the levels of higher education (Bachelor's degree) compared with the basic education groups (less than 9 years of education). Results are offered as a tool for the study of language acquisition in Mexican infants from different SES contexts and are discussed within the framework of individual differences considering international research with Spanish- and English-speaking infants.

Influential Factors in Language Development: The Role of Individual Differences

Language ability in early childhood is among the best predictors of school readiness and later school success, as well as most critical developmental milestones (Gambi et al., 2020; Hoff, 2009; Madigan et al., 2019; Pace et al., 2017, 2019). This fact becomes significant because most of the social exchanges in which the infant participates constitute a relevant background of the language acquisition process. One of the infant's first and most significant social experiences comes from interactions that occur in parenting situations involving mother and child, where eye contact during breastfeeding begins to increase, which will subsequently lead to speech shifts (Arias-Trejo & Hernández, 2007; Teepe et al., 2017).

Understanding the form and function of individual differences can be important across many research traditions as it helps to determine the reach as well as the predictive value of developmental science. Indeed, "a clear understanding of when, where, and for whom, mechanisms of interest are at play in development is a core feature, necessary to our discipline's social utility" (Pérez-Edgar et al., 2020). In their work, Madigan et al. (2019) highlight the importance of mother–child interaction behaviors. Through a meta-analysis, the author found that infants whose caregivers showed high levels of responsiveness and sensitivity had stronger language skills than infants who received lower levels of such behavior. At this level of analysis, responsive parenting can encourage children to have greater social interactions that in turn, favor language. In general, it has been described that children (both English and Spanish learners) of responsive mothers are more motivated, exploratory, and enthusiastic in seeking new information than children whose mothers exhibit less responsive behaviors (Guerrero & Alva, 2015; Madigan et al., 2019).

As Kidd et al. (2018) mentions, the presence of individual differences in the study of development is undeniable; however, there are some experimental methods that, owing to the nature of the measurements used, may underestimate their importance. Such is the case of Intermodal Preferential Looking Paradigms (Alva, 2007; Fernald et al., 2006; Golinkoff et al., 1987, 2013; Kidd et al., 2018), which, although they are very useful systematic procedures for the study of language acquisition and language development at an early age, have the disadvantage of being unreliable

when few trials are available for the analysis of visual reaction times, which is a known measure of linguistic processing (Egger et al., 2020). On the other hand, this methodological perspective has the potential to clarify theoretical controversies, specifically in research whose measurements infer language processing (Donnelly & Kidd, 2020; Kidd et al., 2018; Leite et al., 2007).

Predictions between information processing and vocabulary were strongly established during the first decade of the twenty-first century, in part, thanks to the use of the aforementioned preferential attention paradigms (Fernald et al., 2001, 2006, 2008; Gambi et al., 2020; Golinkoff et al., 2013). In recent years, research has replicated some of the findings from the beginning of the century, in both English and Spanish learners (Alva & Suárez, 2017; Kidd et al., 2018; Suárez, 2015), as well as helping to understand how differences arise in the general linguistic ability of young children (Mahr & Edwards, 2018). One of the first studies to longitudinally analyze processing speed (measured as visual reaction time) and vocabulary of English-speaking infants aged 18 and 21 months was that by Fernald et al. (2001). In their study, the authors found that at both ages the infants who presented fewer errors and shorter reaction times had more than 100 words in their vocabulary reported by their parents, and that infants with fewer than 60 words in their vocabulary had the longest reaction times and the highest number of errors on the experimental task. Subsequently, Fernald et al. (2006) showed that 25-month-old infants with short reaction times and fewer errors in a word recognition task had a higher vocabulary reported by their caregiver; in contrast to infants with longer reaction times and more errors, who had a lower vocabulary according to their parental report.

In another study, Donnelly and Kidd (2020) showed some evidence of a causal effect of lexical processing, measured with the *Looking while listening* paradigm proposed by Fernald et al. (2008), on the vocabulary size of infants aged 18–24 months (Donnelly & Kidd, 2020). Although the study did not replicate findings regarding the strength and direction of the relationship between variables, the importance that lexical processing is stable in childhood and can help to understand lexical development in later ages was highlighted in other works (Alva & Suárez, 2017; Donnelly & Kidd, 2020; Egger et al., 2020; Gambi et al., 2020; Pace et al., 2019). Likewise, it has been shown that making methodological modifications to the original paradigm helps to solve the implicit disadvantages in said settings (Egger et al., 2020; Golinkoff et al., 2013).

The aforementioned studies have contributed and described the performance of infants who are mostly English learners; however, there is recent evidence that describes these types of skills and the relationships between variables with Spanish learners. For example, Suárez et al. (2015) conducted a study to determine whether processing speed (reaction time) of Mexican babies aged 10 months could be a predictor of communication skills such as productive vocabulary, in the same babies at later ages. Through a Word learning task in an Intermodal Preferential Looking Paradigm, the authors found that reaction time measured at 10 months of age can be used as a predictor of performance in vocabulary measures in the same infants a year and a half later. The results presented in this study imply that infants who take longer to process a novel object associated with a novel word are those who will

have more words in their productive vocabulary during the second year of life, as reported by parents. The results obtained support the study of processing speed at early ages in tasks that measure cognitive abilities other than word recognition. Furthermore, the study by Suárez et al. (2015) suggests taking into account the analysis of individual differences, either processing speed or vocabulary, to better understand the relationship between these two variables in the first years of life, emphasizing the importance of the study of processing speed across different linguistic abilities in infants.

Likewise, in a follow-up to the findings with Mexican infants, Alva and Suárez (2017) analyzed the individual differences in processing speed in the first year of life. Using the same paradigm of preferential attention as Suárez et al. (2015), they obtained the reaction time in a word learning task, in addition to the vocabulary score through the MacArthur Inventory (CDI-I). The authors found that infants who scored above the 75th percentile on the comprehension subscale of the test were 11% faster in the word learning task than their peers below the 25th percentile. Overall, these results supported the importance of information processing and vocabulary, from the perspective of individual differences.

Socioeconomic Status

Among the most notable individual differences in language acquisition are an infant's gender and family context, the latter including SES (Madigan et al., 2019; Montanari et al., 2020; Pérez-Edgar et al., 2020; Teepe et al., 2017). Regarding gender, it is known that girls have more advanced vocabulary development than boys, and sometimes demonstrate word-learning techniques that boys of the same age do not show. In this sense, girls mature faster, and the area of their brain devoted to language specializes sooner, giving them some advantage over boys. Significant early effects of gender have also been found in studies combining parental-report procedures with other, experimenter-controlled, methods (e.g., Bornstein et al., 2004); however, it is worth noting that in their study of 329 children age from 1 to 6 years, Bornstein and colleagues found that the female advantage disappears during the 6th year (Bornstein et al., 2004).

The idea that there is an advantage of girls over boys in terms of their verbal and linguistic abilities arises from some classical developmental studies (Neprash & Anastasi, 1938; Tyler, 1965) and has been maintained to the present day, despite the existence of few systematic investigations that confirm these differences (Bornstein et al., 2004; Wallentin, 2009). In industrialized countries such as the USA, differences in linguistic abilities are more related to income disparities, years of education of one or both parents, private/public education, health care outcomes, high school graduation rates, geographical area of residence, job placement, and many more life milestones (Golinkoff et al., 2019; Levine et al., 2018). It is worth mentioning that mechanisms in which these factors operate are diverse and variable in

their potential impact because they describe multiple possible interactions between them (Bradley & Corwyn, 2002; Fenson et al., 1994).

As mentioned by Hart and Risley in their famous 1995 study, SES is a factor that influences vocabulary performance measures regardless of other variables (such as race) and in the previously mentioned work, the authors described for the first time a "vocabulary gap" of more than 3000 words between high and low SES children. Hart and Risley's study (1995) was pioneering in numerous findings on differences in early vocabulary development. Their postulates about the importance of SES for lexical development have been replicated in subsequent investigations, and its crucial role in child development continues to be analyzed (Dollaghan et al., 1999; Golinkoff et al., 2019; Montanari et al., 2020). Evidence suggests that income level in neighborhoods is also associated with the academic performance of preschoolers. Results have shown that household income levels at the ages of 4 and 5 are associated with verbal and academic performance in preschool education; that the effects of poverty are nonlinear (more accentuated at the lower limit of the income variable continuum); and that the effects of income from the geographical area of residence are less than the effects of household income, the level of education of parents or maternal marital status (Fenson et al., 1994). In a longitudinal study with Mexican infants, Castro and Alva (2003) found that the early advantage of upper-class infants allows them to stabilize smoothly between the ages of 5 and 8, and lower-class infants recover from the initial disadvantage until they reach their peers at age 8. However, the authors found that between the ages of 9 and 11, upper-class schoolchildren increase the advantage over their lower-class peers unattainably (Castro & Alva, 2003).

In studies on vocabulary development, it is known that preschoolers from lower SES families performed significantly worse than preschoolers from higher SES families on three language components, vocabulary, syntax, and language-learning processes, and that children whose primary caregivers had less than a high school diploma, showed the lowest scores on all these three components (Dollaghan et al., 1999; Horton-Ikard & Weismer, 2007; Levine et al., 2018; Pace et al., 2017). At the beginning of development, the differences in terms of SES are very small but they increase as children grow. Research in recent decades has focused on understanding the extent to which family SES relates to American parents' language input to their children and, subsequently, children's language learning (Schwab & Lew-Williams, 2016; Shavlik et al., 2020). Studies like those by Hoff (2013) and Chen' and colleagues (2018) showed that there is an indirect effect of SES on reading ability through the parent–child relationship, and remarks on the importance of building a better family atmosphere. In studies with Latin participants, García and Vargas (2008) made a comparison in the extension of narrative vocabulary by educational institution and by gender in Mexican children in the third year of primary school. They found that in the narrative vocabulary, derived from written texts, it was the upper-class participants who had a larger vocabulary than lower-class participants, especially boys. However, lower-class subjects showed no gender differences.

Thanks to previous literature, we now know that joint reading activities can be very beneficial for vocabulary development in infants. Studies carried out by Suárez,

Valdés, and colleagues (Alva et al., 2016; Suárez et al., 2016a, b; Valdés, 2015; Valdés et al., 2015a, b, 2017) that assess mother–child interactions in Mexican families from middle SES have shown a positive and direct relationship between the caregiver's vocabulary and the lexical repertoire of their children. This relationship was reported to be stronger at early ages (30–42 months) and starts to diminish after 48 months of age (Ferreira et al., 2016).

Derived from the studies mentioned above, we can infer that a more enriched environment that includes dyadic interaction, as well as having a privileged SES, can reduce the effects on the linguistic domains of children in stages of acquisition of this cognitive process (Alva, 2020; Mendive et al., 2017; Price & Kalil, 2018). Also, it has been revealed that the impact of SES can be minimized by the involvement of children in school programs (Madya et al., 2019), as well as dyadic activities with their caregivers (Guerrero & Alva, 2015; Suárez et al., 2016a).

Although it is widely accepted that childhood SES correlates with language ability and subsequent academic achievement (Bojczyk et al., 2016; Chen et al., 2018; Fernald et al., 2008; Golinkoff et al., 2019; Madya et al., 2019; Montanari et al., 2020; Pace et al., 2019; Rose et al., 2011; Strouse & Ganea, 2017), much less is known about the pathways by which SES exerts its well-established influence (Pace et al., 2019). On the contrary, we do know that poverty has a greater impact when it is long term in the family and is associated with the mother's low level of education (Bradley & Corwyn, 2002; Cadime et al., 2018; Chaparro et al., 2016; Gonzalez et al., 2017; Mendive et al., 2017; Montanari et al., 2020).

Maternal Education

Maternal education (usually measured as a categorical variable representing groups of various levels of formal schooling, ranging from no high school education or limited high school education to high school education, some college, or an earned college degree) appears to be the component of SES most strongly related to child development outcomes (Pace et al., 2017; Teepe et al., 2017). It has been specifically found that when the mother's level of schooling is lower than high school, the infant shows a set of effects such as reduced expressive language, social and behavioral problems, deficits in social interaction, delays in reading skills (when they begin to develop), and even mental retardation (Cadime et al., 2018; Campbell et al., 2003; Friend et al., 2017; Gonzalez et al., 2017; Iwaniec, 2020; Montanari et al., 2020).

In contrast, there are some studies that report that the father's educational level (more than that of the mother) influences the vocabulary of infants. Zvara and Schoppe-Sullivan (2010) mention that when the father has a higher level of education than high school, children benefit in terms of cognitive development, whether or not they had low birth weight problems (Zvara & Schoppe-Sullivan, 2010). Also, in studies with Spanish learners from Latin countries such as Mexico, this has been observed in infants whose fathers completed a college degree (more than 16 years

of study) compared with infants of fathers with less than 9 years of study, even if the father doesn't live in the same house with the child and his/her mother (Alva, 2004). A consequence of children's limited language and/or limited interest or engagement in reciprocal exchanges with a parent is that parents may find fewer opportunities to engage in sensitive/responsive parenting (Guerrero & Alva, 2015; Madigan et al., 2019). This leads us to a similar problem when parents are asked to respond to parental reports. Because caregivers need to recall those situations in which their children comprehend or produce a specific word, frequently they tend to underestimate or overestimate the size of the infants' vocabulary, and trying to please the experimenter enhances the bias.

Parental Reports

An area where marked differences have been observed according to parents' education and SES, is the estimation of the infants' lexicon. As mentioned above, it is a fact that there is a tendency to overestimate or underestimate infant's vocabulary according to parent schooling (Alva, 2004; Fenson et al., 1994; Roberts et al., 1999). According to Reznick and Goldsmith (1989), parents with a lower level of education give significantly higher vocabulary scores to their children learning English in comprehension tests than more highly educated parents. On the contrary, Alva (2007) showed that in Mexican families, parents with a high level of education reported a larger vocabulary from their children than parents with fewer years of study.

Parental reports are widely used in language acquisition and language development research. These instruments are defined as a useful tool for measuring vocabulary through daily estimates that parents make of the words their children comprehend and produce (Fenson et al., 2000). In order to be able to answer such instruments, specific behaviors exhibited by the child need to be recognized; thus, parents are invited to reflect and learn about their children's language in detail (DeMayo et al., 2021), allowing the evaluation of infants in different contexts without requiring their active participation.

It should be noted that this type of instrument presents a wide variability in the production and comprehension scores, as well as providing comprehensive and representative assessments of children's language skills that could hardly be obtained in the clinical or experimental setting. One of the advantages of parental reports is that their administration and scoring are not high-cost in terms of time and money; thus, their use is quite attractive for those studies in which it is intended to study a large sample and individual evaluations would be expensive (Giammarco, 2020). However, despite all the advantages of parental reports, such instruments fail to detect identifiable linguistic development patterns and estimate neither the effects of contextual variables such as the socioeconomic level nor the ethnographic group to which the infant belongs.

The most prominent parental report used in the study of verbal skills is the Communicative Development Inventory, known as MacArthur CDI (DeMayo et al., 2021; Fenson et al., 1994, 2000; Saeed, 2019; Wallentin, 2009). The various investigations carried out with these parental reports have found high correlations between the scores obtained from CDI's and the measures derived from audiovisual recordings or experimental observations (Moore et al., 2019; Styles & Plunkett, 2009; Suárez, 2015); therefore, some authors (Mariscal et al., 2007; Suárez et al., 2015) deduced that parents are reliable informants of their children's communicative development (DeMayo et al., 2021) when they are under the age of 3 years.

However, despite the various applications and standardizations, Fenson et al. (2000) acknowledge that the CDI has some limitations that may be due not only to the instrument but also to the intrinsic properties of the phenomenon studied, in particular to the great variability that occurred in the production of vocabulary up to 30 months of life, which arises as a result of the "vocabulary spurt" that occurs between 18 and 30 months of age in English learners (Bloom, 2001; Hollich et al., 2000) and from 23 to 36 months in Spanish learners (Alva & Hernández-Padilla, 2001a, b).

Research Data on Parental Estimation of Mexican Infants' Vocabulary

Among the various adaptations that were made of the CDI is the one adapted and used in the Baby Lab from the Faculty of Psychology (UNAM) in Mexico City. This version was originally called Inventory on the Production of Language in Mexican Infants (Inventario de Producción de Lenguaje en Infantes Mexicanos, IPLIM) (Alva & Hernández-Padilla, 2001b), later becoming the Inventory of Comprehension and Production of Language in Mexican Infants (Inventario de Comprensión y Producción de Lenguaje en Infantes Mexicanos, ICPLIM; Alva et al., 2013).

Each of the items that formed the ICPLIM correspond to words considered to be frequently used in the vocabulary of Mexican infants. The ICPLIM consists of a vocabulary list of 560 items in which the parents or caregivers indicate which words the child comprehends and produce. This vocabulary list is divided into 19 semantic categories: *animals*; *toys*; *food*; *games and routines*; *vehicles*; *body*; *clothes*; *prepositions and locations*; *household items*; *exterior*; *quantifiers*; *furniture*; *people*; *pronouns and articles*; *descriptive words*; *onomatopoeia*; *time*; *words of action*; and *interrogative words*. Also included in the ICPLIM are verbs, pronouns, and the most relevant descriptive words of the Mexican lexicon, as well as offering the option for participants to report extra words.

Several authors have had an interest in studying verbal comprehension, as they consider that this gives a more accurate picture of the content of the infant's language system (Fernald et al., 2006; Hadley et al., 2016; Hurtado et al., 2007; Patrucco-Nanchen et al., 2019). In addition, studies on language understanding allow evaluation of a wide range of syntactic knowledge that is not produced,

assuming that when children produce a word it is because they have usually already understood it (Golinkoff et al., 1987; Karmiloff & Karmiloff-Smith, 2001; Styles & Plunkett, 2009). Specifically, the term comprehension refers to the situation in which parents assume that the infant identifies or recognizes a particular word, object, or action (even if it is not present). The term production includes in addition to the above that the infant is able to emit the word spontaneously in any context (even if he does not pronounce it correctly). ICPLIM is an instrument that is presented to Mexican parents for the purpose of knowing their child's language skills in their early years of life, essentially those based on the elements of verbal comprehension and production.

The ICPLIM has been used in numerous research works since its first versions. Vocabulary scores reported by parents through this instrument were used in many important studies, such as that performed by Naves et al. (2007), where the percentage of comprehended and produced words of children aged 18, 24, and 30 months was analyzed, finding an increase in vocabulary in relation to age. Similarly, Suárez et al. (2010) conducted a study comparing the effectiveness of two methods, one being direct observation in natural scenarios or environments and the other that of parental reports, in which it was found that both yielded similar results in terms of the acquisition and development of language in infants aged 12–30 months, using the ICPLIM as the parental report, which concluded that both methods have the same level of reliability.

According to Jackson-Maldonado et al. (2003), content validity is defined as the degree to which the content of the scale records the one the researcher wishes to evaluate. It is determined by assessing whether the components relate to the skills that the instrument is designed to measure (Jackson-Maldonado et al., 2003). This kind of validity of the ICPLIM is based on the fact that it contains a sample of the main characteristics of communicative development over the age range from 12 and up to 30 months. In addition to the words included in each category, they were taken from published studies of Spanish-speaking journals, doctoral thesis databases, unpublished Spanish language data, comparable elements in Spanish-speaking language tests, and extra words reported by parents.

The additional evidence of validity lies in the fact that the development functions obtained through the various categories correspond closely to the development functions that have been mentioned for the same variables in observational studies. Close parallelism between data obtained with inventories and development patterns reported in specialized literature is considered to be extremely important evidence for convergent validity (Jackson-Maldonado et al., 2003; Suárez et al., 2010).

Present Study

Taking into account previous literature with Mexican infants, and in order to contribute to the study of vocabulary development within families from different SES, the aim of this study was to establish criteria for estimating the development of

language in Mexican infants from 12 to 30 months of age through the ICPLIM. The variables of interest considered in this study were: the educational level of parents and the age, gender, and number of words comprehended and produced by infants (reported by their caregivers). The age was recorded in months and days of infants at 12, 18, 24, and 30 months. As for the educational level of the mother, it was distributed among four levels recognized by the Mexican education system: basic (<9 years of education), high school (between 9 and 12 years), college education (between 12 and 16 years), and postgraduate (>16 years). Word comprehension corresponds to the number of words the child reacts to when listening to or seeing them represented in a physical stimulus. In turn, the production of words concerns the number of words that the child emits spontaneously, differentiating them from those he is able to imitate.

In the present study, inclusion and exclusion criteria were used for both infants and caregivers. For children, the inclusion criteria were infants born to term and Spanish as their first and only language. For caregivers the inclusion criterion was to be a native Spanish-speaking parent. The exclusion criteria were those infants with high-risk prenatal and genetic diseases that were potential producers of brain damage, perinatal problems, as well as hearing and vision problems reported by parents.

The final sample consisted of 1302 infants: 62 infants aged 12 months (34 boys/28 girls), 263 infants aged 18 months (134 boys/129 girls), 541 infants (278 boys/263 girls) aged 24 months, and 436 infants (244 boys/192 girls) aged 30 months, without perinatal problems, neither hearing nor vision problems, born to term, whose mother language is Spanish.

The invitation to participate in the study was made through dissemination such as brochures and posters in the public transport of Mexico City, as well as advertisements in the gazette of the university where the research was carried out. After such dissemination, interested parents phoned and provided their contact details and shared general data on their children, as well as verbally expressing their interest in collaborating in the study. Parents were subsequently contacted when their baby was the age required for the age groups of interest and an appointment was made. The meeting took place at the facilities of the Baby Lab; each of the caregivers along with their child were attended by a laboratory collaborator, who provided general instructions for answering the inventory themselves and responded to the questions that arose in order to obtain proper completion of the ICPLIM.

For data collection, the sociodemographic questionnaire (Alva & Arboleda, 1990) was used to obtain general information from the participants and subsequently the ICPLIM was applied to each of the participating parents, asking them to answer: whether their child already knew each of the words grouped into categories and that if in addition, he/she also produced it. After the collection of the data, all the words contained in the inventory were captured and codified to obtain the total number of words comprehended and produced by category. Finally, the corresponding analyses of the variables of interest were carried out, calculating quartiles of the vocabulary scores arranged by the variables: age, gender and mothers' years of

education. Table 5.1 shows the average and standard deviation of the words reported by caregivers as comprehended and produced by their children in the four age groups, differentiated by gender.

A variance analysis was performed to determine the effect of age on the total score of the Comprehension and Production measures, which was statistically significant: Comprehension (F = 41.60, 3, p = 0.000); Production (F = 241.54, 3, p = 0.000). For Comprehension, Bonferroni's post hoc test showed that there were differences between age groups, with the exception of the 18- and 24-month groups (p = 0.284), where no significant difference was found. On the other hand, for Production, the differences between age groups were statistically significant at all ages, with the exception of the comparison between the groups of 12 and 18 months of age, where no statistically significant differences were found (p = 0.065).

As for gender, Student's t tests were performed and showed that there were no statistically significant differences between groups of girls and boys for Comprehension at any of the ages studied: 12 months (t = −0.325, 60, p = 0.74); 18 months (t = −0.292, 261, p = 0.771); 24 months (t = 1.03, 538, p = 0.30); and 30 months (t = 1.38, 434, p = 0.16). For 12- and 18-month-old girls more comprehended words were reported than for boys. On the contrary, for 24- and 30-month-old boys more words were reported than for girls. As for the Production measure, differences were found by gender in two of the four age groups analyzed (24 and 30 months): 12 months (t = −0.158, 60, p = 0.875); 18 months (t = −1.885, 261, p = 0.061); 24 months (t = 3.79, 538, p = 0.000); and 30 months (t = 2.87, 434, p = 0.004). In all cases, the infants' word production reported by the parents was higher for girls than for boys.

As for the mother's educational level, variance analyses were performed to determine differences in Comprehension and Production between age groups. The results showed that, for Comprehension, there were no differences in the mother's schooling in 12 months (F = 0.629, 3, p = 0.599), 18 months (F = 0.221, 3, p = 0.882), or 24 months (F = 0.302, 3, p = 0.824), but statistically significant differences were found at 30 months of age (F = 7.2, 3, p = 0.000). Bonferroni's post hoc test showed that there were differences in this age group between basic education (<9 years of study) and the other three schooling groups. Estimates of mothers with basic education were higher than estimates of mothers with more than 9 years of study. However, these findings should be taken with caution because it can be explained by an effect of the instrument instructions given to caregivers. This means that when a word from the list is marked as produced, it implies that the infant also comprehends it. Thus, it is natural that the total of words comprehended reported by parents decreases as a function of the infant's age, because they were marked as produced (this will be discussed later).

For Production, there were no differences in the mother's schooling at 12 months (F = 0.383, 3, p = 0.765), 18 months (F = 0.871, 3, p = 0.456), or 24 months (F = 0.043, 3, p = 0.988), but there were at 30 months of age (F = 5.51, 3, p = 0.001). Bonferroni's post hoc test showed that there were differences at this age between group 1 (<9 years) and the other three groups. In contrast to the previous section, estimates of mothers with basic education were lower than estimates of mothers

Table 5.1 Total number of comprehended and produced words reported by caregivers for their children in each age group, and gender

			Both genders		Girls		Boys	
	Age (months)	*n* (girls/boys)	*M*	SD	*M*	SD	*M*	SD
Comprehended	**12**	62 (28/34)	**74.81**	78.22	78.39	81.4	71.85	76.5
	18	263 (129/134)	**182.79**	95.86	184.55	96.88	181.1	95.2
	24	541 (263/278)	**167.57**	104.14	162.61	101.76	171.85	106.3
	30	436 (192/244)	**116.15**	105.79	108.27	105.06	122.35	106.16
	Total	1302						
Produced	**12**	62 (28/34)	**6.92**	13.26	7.21	11.6	6.68	14.6
	18	263 (129/134)	**49.64**	71.47	58.07	80.48	41.53	60.77
	24	541 (263/278)	**149.11**	119.35	169.06	118.86	130.51	117.14
	30	436 (192/244)	**272.32**	145.72	294.72	141.09	254.69	147.16
	Total	1302						

M mean, *SD* standard deviation

with more than 9 years of study. In addition, these same variance analyses were performed taking into account the father's level of schooling, which made no statistically significant difference. For Comprehension: 12 months (F = 2.19, 3, p = 0.099); 18 months (F = 0.445, 3, p = 0.721); 24 months (F = 0.711, 3, p = 0.546); and 30 months of age (F = 0.537, 3, p = 0.657). For Production: 12 months (F = 2.27, 3, p = 0.090); 18 months (F = 0.854, 3, p = 0.465); 24 months (F = 0.702, 3, p = 0.551); and 30 months of age (F = 0.329, 3, p = 0.805).

Below, a quartile score table (Table 5.2) is presented for both Comprehension and Production scores arranged by age, gender, and mother's educational level of the 1302 infants. The reader may be able to identify specific cases that correspond to the combination of these variables (e.g., number of words produced by 18-month-old girls with mothers with a basic educational level), and make qualitative visual comparisons between groups.

Contributions and Final Considerations

The large number of studies regarding language development that currently exist account for the relevance that this domain has for child development and has helped us to understand from a broader perspective how this psychological process impacts the formation of other cognitive skills over time. The main variable discussed in this chapter was the family SES of infants of early ages, specifically, characterized as maternal educational level (years of study) and its influence on the development of the child's language, specifically, receptive (comprehension) and productive vocabulary. Given the great variability in lexical development in both English and Spanish learners (Bloom, 2001; Hollich et al., 2000), as well as some limitations for its measurement from the existing parental reports (Fenson et al., 2000), the aim of this research was to establish criteria for estimating vocabulary development relevant to Mexican children from different social contexts, in an age range of 12–30 months. This was achieved with the use of the ICPLIM (Alva & Hernández-Padilla, 2001a), a vocabulary inventory designed for use in research with Mexican children of early ages and whose value and validity have been demonstrated in previous studies (Naves et al., 2007; Suárez et al., 2010).

The data obtained in this study are of great value and establish a benchmark for the research of the vocabulary of Mexican children through instruments of "pencil and paper." The calculation of quartile scores with respect to inventory comprehension and production scores represents a useful tool where the size of the children's lexicon in four age groups, in the first years of life, can be identified. Likewise, researchers and health professionals can make use of the instrument's standards and establish criteria ad hoc to their research objectives or make comparisons with other development indicators considering the background of Mexican infants and their families. In particular, it is possible to find out the average size of the vocabulary of infants of specific age, gender, and SES, and use these variables in combination as a guidance framework for the treatment of infants, both under typical

Table 5.2 Comprehension and production Inventory of Understanding and Production of Language in Mexican Infants (ICPLIM) scores of boys and girls in the four age groups analyzed in this study, arranged by the educational level of the mother

		Comprehension															
		12 months								**18 months**							
		Girls				**Boys**				**Girls**				**Boys**			
		Mother's educational level (years)								**Mother's educational level (years)**							
		<9	**12**	**16**	**>16**	**<9**	**12**	**16**	**>16**	**<9**	**12**	**16**	**>16**	**<9**	**12**	**16**	**>16**
Quartiles	**25**	52	38	28.7	16.2	3	5	22	16	123	102	107	112.7	52	84	145.7	113
	50	70	73	50.5	33	3	33.5	69	42	167	151	204	176	198	139.5	209	160.5
	75	96	302.7	71.7	142.2	3	80	171	80	306	189.5	273	255	251	198.2	279.7	253.7
		24 months								**30 months**							
		Girls				**Boys**				**Girls**				**Boys**			
		Mother's educational level (years)								**Mother's educational level (years)**							
		<9	**12**	**16**	**>16**	**<9**	**12**	**16**	**>16**	**<9**	**12**	**16**	**>16**	**<9**	**12**	**16**	**>16**
Quartiles	**25**	41	89.5	79	87.7	68	87	84.7	105	19.7	25	24.5	33	30	36.7	43	34.5
	50	140	171.5	146	152	147	145	133.5	196	78	76	67	83	173.5	102	95	90
	75	219.5	238	217	222	243	235.5	214.7	263.5	174.25	161	195	150.5	295	193.5	184.5	146.5
		Production															
		12 months								**18 months**							
		Girls				**Boys**				**Girls**				**Boys**			
		Mother's educational level (years)								**Mother's educational level (years)**							
		<9	**12**	**16**	**>16**	**<9**	**12**	**16**	**>16**	**<9**	**12**	**16**	**>16**	**<9**	**12**	**16**	**>16**
Quartiles	**25**	0	0	1	0.7	25	0.5	0	0	11	11	13	8.7	1	10.7	12	7.2
	50	0.5	2.5	4.5	3.5	25	4	2	1	21	24	29	31.5	21	24.5	27	14.5
	75	6.2	7.5	13.2	18	25	60.7	7	4	79	56.5	81	82.7	44	48.2	48	59.2

		24 months								30 months							
		Girls				Boys				Girls				Boys			
		Mother's educational level (years)								Mother's educational level (years)							
		<9	12	16	>16	<9	12	16	>16	<9	12	16	>16	<9	12	16	>16
Quartiles	25	35.5	38.5	78	73	9.5	29	34.5	32	177.2	217	114.5	217	24.7	132.7	118.5	170
	50	139	136.5	175	157.5	87	112	89	97	251.5	319	331	330	186.5	265	310	305
	75	297.7	238	299	224.2	226	191.5	195.2	233.25	382.5	421	396	405.5	292.7	386.2	364	378.5

developmental conditions and in situations of suspected atypical development. The latter is relevant because, when considering the SES of the child, unfair comparisons of infants that normally score at the ends of the performance continuum are avoided.

It is important to mention that the results presented here are not intended to underestimate the value, nor to replace the use of other parental reports such as the MacArthur CDI (Jackson-Maldonado et al., 2003). Previous international literature has consistently demonstrated its usefulness and application in vocabulary development research (Giammarco, 2020; Peter et al., 2019), both in the laboratory and in digital settings (DeMayo et al., 2021), multiplying its accessibility and benefit. What is intended is to offer a complementary tool that reflects the characteristics and diversity that the infants of central Mexico present and that together with other tools enhance the value of the findings of research carried out with Spanish learners in the first years of life.

One of the main premises revealed throughout this chapter, is that parental education has an impact on infants' language development; therefore, it is very important to consider its study, as well as its control in situations where this is possible. The research described above showed a differential effect on the estimation of infant's vocabulary between mothers and fathers according to their years of education. It is interesting to note differences between mothers with a low level of education and the other education groups studied, and how this discrepancy (or some other) was not observed with the fathers. This implies that, in Latin cultures such as Mexican, the weight of the mother–child relationship goes beyond attachment and emotional development, as it indirectly favors to a greater or lesser extent the lexical development that is known to be fundamental to the optimal subsequent development of other complex cognitive skills (Fernald & Marchman, 2012; Rose et al., 2011; Williams et al., 2008). This finding is in contrast to some studies that report a greater influence of the father on children's vocabulary (Alva, 2004; Zvara & Schoppe-Sullivan, 2010); however, discrepancies with previous research may be due to the methodology used or the age range studied, which is higher than that of the children studied here; thus, more research is suggested in this regard to help to clarify these differences.

The dissimilarities in estimating vocabulary among maternal schooling groups were more evident in verbal production (compared with comprehension). This can be explained in at least two ways:

1. Estimating the words a child understands is harder than estimating the words a child emits or produces. Mothers often tend to assume that their child understands a word without having a clear criterion for making such an appreciation (Styles & Plunkett, 2009) or because they expect their child to get an outstanding score on the instrument and, therefore, please the experimenter. On the contrary, the estimation of the produced words results from a memory exercise of recognition of the expression and quantitatively measurable behavior of the infant; therefore, the parental report is more reliable.

2. When checking a word as produced in the inventory, it is theoretically assumed that this word is also understood by the child (Karmiloff & Karmiloff-Smith, 2001). This produces an effect in which comprehension scores increases with age up to 24 months, and then begins to decrease. Clearly, this does not mean that 2-year olds understand fewer words, but that the score is simply reflected in the production column. Taken together, these facts cause a nonlinear function between variables of comprehension and age; thus, the recommendation is to use parental reports to measure comprehension in infants with typical development younger than 18 months or depending on the age of occurrence of the vocabulary explosion described in each language (because after the appearance of this phenomenon the comprehension variable (score) is not sensitive).

After this age, dyadic interaction activities have turned out to be more informative about the effect caregivers have on their children's verbal development. Illustrated books without text are a great tool when the intention is to study the effect of family context on development, as well as having the advantage that the same material can be used in Spanish and English learners without distinction. In studies with Mexican children, research using joint reading and dyadic interaction tasks (Guerrero & Alva, 2015; Suárez et al., 2016a, b; Valdés, 2015), have contributed to the understanding of language development as well as parenting styles, and are used successfully with families of middle SES.

With regard to gender, it is not surprising that there were no differences between boys' and girls' vocabulary scores (comprehension/production) in any of the four age groups. Although the study of differences in language competency between boys and girls remains of "popular" interest, presumably because of the heritage of the findings of classical studies (Neprash & Anastasi, 1938; Tyler, 1965), little current research considers the analysis of this variable, and even fewer studies find statistically significant differences to report. It is well known that brain development among boys and girls occurs at a different rhythm in the early stages of life. However, the existing accumulated scientific evidence forces us to pay more attention to cognitive and sociocultural variables with greater influence on child development, and whose clearer effects are observed.

Such is the case of the processing speed variable, which, measured through visual reaction times, is related to lexical development in such a way that children with faster reaction times also present more words in their vocabulary (Donnelly & Kidd, 2020; Kidd et al., 2018; Suárez et al., 2015). Studies that use visual attention paradigms represent a breakthrough in the study of early skills in children, both technologically and theoretically, by accepting that different cognitive domains relate to each other in ways that previously could not be detected. One of the advantages is that the results obtained from these paradigms are immune to idiom differences. It is true that most of them require the use of some words or phrases of the infant's native language, but the interpretations and implications of the findings are universal and inherent to human behavior. The power these paradigms have to describe correlations and even predictions between variables in infants is very wide and increases from the perspective of individual differences. Some of the most

representative are those that relate processing speed to academic performance or IQ, and those studies that use these paradigms for the study of children with a disorder such as Autism Spectrum Disorder or Down's Syndrome (Arias-Trejo et al., 2019; Naigles & Tovar, 2012; Potrzeba et al., 2015; Rose et al., 1988, 2011).

Some of the limitations of this research are that groups of different ages were not homogeneous in number, as well as the fact that caregivers tend to want to please the researcher, often causing a bias in their responses. Likewise, the sample only included participants residing in and around Mexico City; thus, it would be desirable for future studies to consider a larger sample that would be representative of the entire country. On the contrary, this study also presents some strengths. Among the most relevant is to establish a parameter of the estimation of the vocabulary of Mexican infants of different ages and SES levels, as well as to contribute to clarifying the weight of the infant's sex variable to the debate of gender differences with regard to linguistic competence.

The results shown here help to better understand the effect of the mother's years of education on the development of infants' vocabulary in Latino families, and build on the findings of previous research regarding the direction of this relationship described in both English and Spanish learners (Montanari et al., 2020; Pace et al., 2017; Teepe et al., 2017). Therefore, it can be said that maternal education is a reliable and useful variable for the study of language development and later cognitive domains. It also highlights the importance of the use of preferential attention techniques for the study of language abilities, which, because of their experimental nature, minimize the biases inherent in "pencil and paper" instruments related to subjective estimation of vocabulary. In the same sense, it is suggested that using experimental techniques should also include more traditional instruments, such as parental reports. In this way, obtaining information about the child from those who are in daily contact with him/her represents an advantage to obtain more accurate observations over child development. What is essential is to use well-operationalized definitions of the variables of interest with views to enabling the replication of findings, as well as allowing systematic comparisons between studies with children from different contexts. Finally, the study of individual differences in any cognitive domain is an approach that is and will remain valid for the study of child development. Its properties help us to determine causal relationships between developmental milestones observed in early stages and subsequent success in adolescence and even adulthood, regardless of the sociocultural profile to which it belongs.

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Chapter 6
Early Disengagements of Babies and Children Without Parental Care: An Early Bonding Reanimation Program

Alicia Juana Oiberman and Aurora Graciela Lucero

Introduction

The purpose of this chapter is to show the results achieved in children aged 6–30 months, who live in Institutions. We developed a specific therapeutic model called Early Bonding Reanimation (*Reanimación Vincular Temprana*, or RVT as per the acronym in Spanish), which embraces the subjectivation processes and the characteristics of the early bonds in children without parental care.

From 2012 through 2020, we carried out an assessment of babies without parental care, who lived in Institutions under the General Office for Childhood and Adolescence (*Dirección General de Niñez y Adolescencia*, DGNyA) of the Government of the City of Buenos Aires. This work was arranged within a collaborative framework between this agency and the High Level Technology Transfer Service (*Servicio de Transferencia Tecnológica de Alto Nivel*) of the National Scientific and Technical Research Council (*Consejo Nacional de Investigaciones Científicas y Técnicas*, CONICET) through Cooperation Agreements between the two entities, with funding provided by the Government of the City of Buenos Aires.

Given the size of the task and the increase in the number of babies admitted to the Institutionalization System (approximately eight babies per week), and the early care required to improve their wellbeing, we made the relevant assessments with the

A. J. Oiberman (✉)
Interdisciplinary Center for Research on Experimental and Mathematical Psychology (Centro de Investigaciones en Psicología Matemática y Experimental, CIIPME), National Scientific and Technical Research Council (Consejo Nacional de Investigaciones Científicas y Técnicas, CONICET), Buenos Aires, Argentina

A. G. Lucero
School of Psychology, University of Buenos Aires, Buenos Aires, Argentina

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psychological instruments designed for the early detection of potential developmental disorders and for an immediate and timely intervention.

To that aim, we used two available assessment tools for young children, the Argentine Scale of Sensor Motor Intelligence (*Escala Argentina de Inteligencia Sensorio-Motriz*, EAIS; Oiberman et al., 2020) and the Psychomotor Development Assessment Scale (*Escala de Evaluación del Desarrollo Psicomotor*, EEDP; Rodríguez et al., 2001).

The Argentine Scale of Sensor Motor Intelligence for babies aged 6–30 months (EAIS) was designed to study the intellectual development of babies aged 6–30 months. The EAIS was one of the proposals that set in motion the activity between the Team of Supervisors at the Institutions of the Government of the City of Buenos Aires and the Assessment and Early Intervention Team at CIIPME-CONICET. These instruments provided an understanding of the psychomotor, cognoscitive, and emotional development of the babies hosted in the Institutions, through the individual work with each child. This meant a specific training process in place for the supervising professional staff of those institutions, and for the lead caregivers, which was provided through the EAIS Training Courses and the corresponding instruction on Early Bonding. From 2013 onward, owing to the number of children requiring specific psychological treatments, we created an instrument for clinical care called Early Bonding Reanimation.

This instrument consists in an individual therapy with each child at the Gesell Dome, where the caregiver observes how the psychologist works with the child and volunteers to act as a "mirror" so that the person in charge of the exclusive care of the child can replicate the interventions that take place within the Institution; the instrument takes as a model the parenthood practices observed in a Wichi indigenous community (Lucero, 2009), where the mothering process is based on absolute psychic accessibility with the baby.

The theory of the object relations posits the existence of a primary need for objects, which goes beyond the quest for pleasure that the self intends to find in order to meet the need for a relationship (Lebovici, 2004).

The theory of object relations is connected to various conceptual stances within the psychoanalytic theory. Among them, Melanie Klein's (1962), who emphasizes the drive determination of the object relations experience and focuses her attention on the internal object and its determining impact on the subsequent life of the subject. The internal world prevails over the significance of the external world. Another clearly defined stance is that of René Spitz (1965), Margaret Mahler (1975), D.W. Winnicott (2009), and Serge Lebovici (2004), who emphasize the structuring effect of the real relation with the object, and the impact of the cultural environment on the psyche (Oiberman & Galindez, 2016).

For Laplanche and Pontalis (1996), the term "object relations" is used to: "designate the way in which the subject relates to his/her world, a relation that is the complex and total result of a given organization of personality, of a more or less fantasized apprehension of the objects and of some predominant types of defense" (p. 359).

For Mahler (1975), the psyche is formed through a continuous and progressive process that results in the intrapsychic object relation that children manage to consolidate when they are around 3 years old. The bond with the mother is required as the only chance of survival (Bleichmar, 2005). The child builds mental representations of the object and the self on the basis of progressive steps in the development of the relations with the objects. The mother's appropriate emotional accessibility and the affective exchange between mother and baby are important features for stimulating the formation of psychic structures (Tyson & Tyson, 2000).

Spitz (1965) seeks to prove that psychological growth and development depend on the establishment and progressive deployment of increasingly significant object relations. He considers that, during most of the babies' first year of life, they make an effort to survive, forming and designing adjustment instruments to attain this goal. Breastfed babies are helpless, unable to survive on their own. Babies need their mother to fulfill all their needs. It is Spitz who introduces the term "dyad" to conceptualize the mother–child relationship. He takes this term from George Simmel (2015). To the extent that the infants' potentialities develop during their first year of life, they become increasingly independent from the surrounding environment.

For the author, the most important aspect in the mother–child relationship is the emotional context. Spitz held that the ongoing dialogue of action and response, which is driven by the emotions and is mutually stimulating, provides the context where object relations and intrapsychic structures appear. According to his description, this dialogue starts during breastfeeding but soon extends beyond that. Call (1984) suggests that these breastfeeding experiences must be considered organizers of the most important early interactions with the mother. To this effect, Call describes the details of this dialogue in terms of nonverbal facial expressions, physical actions, vocalization, responses, and ludic interactions that provide the basis for the development of a private and exclusive communication of the baby with the mother. The main purpose of this early communication system is to sustain, maintain, and mutually enrich duality. According to Call, this system becomes the organizing principle of further forms of communication, including emotions, gestures, and the acquisition of language.

The relevance of the development of a libidinal object does not lie only in the fact that children can integrate the loving and emotional aspects of their mothers with their hostile and irascible aspects, but also in those children who are certain that their emotional relationship will remain, despite short separations or temporary feelings of rage and resentment. In other words, the child can maintain a constant relationship with the mother, in spite of the frustration vicissitudes and satisfactions in place during development. The child goes from nearly exclusively egocentric, demanding, and attachment behavior to being able to get involved in long-lasting relationships, determined by the self and characterized by affection, trust, and some consideration (even though limited by cognoscitive immaturity) for the interests and feelings of others.

The theory of internal objects designs a new structure of the mind and underlines that it is bonds that lead to mental development, rather than the drives as biological forces; there is always a motivation in any psychological process, impacting on the psychic reality (Ramírez, 2010). The internal objects are representations of characters we acquire by introjection and identification, which establish unconscious fantasies. Human emotions would not only be pure instinctual forces but the result of unconscious fantasies (Ramírez, 2010).

For Melanie Klein (1962), both the internal objects and the unconscious fantasies create meanings within the psychic reality and these are projected to the external reality providing different significances at each life experience. What is essential is the emotional bond, whereas drives are significant as long as they address the objects. For Melanie Klein, reality is the interplay between internal and external aspects acting simultaneously on the psyche and determining a complex organization in the construction that each individual makes out of reality.

For Donald Winnicott (1996), the communication and the ability to establish such a connection are closely related to the establishment of object relations. Object-relating is a complex phenomenon: the development of the capacity to relate to objects is not just a question of a simple maturity process. As is usually the case, the maturational process requires and depends on "the quality of the facilitating environment." When the scene is dominated neither by privation nor by deprivation and, therefore, the facilitating environment may be taken for granted in the theory of the earliest and most formative stages of human growth, the individual gradually develops a change in the nature of the object in such a way that the object, which is a subjective phenomenon at the beginning, gradually becomes objectively perceived.

At this early stage, the facilitating environment provides the infant with the experience of omnipotence within the scope of a relationship with subjective objects. The concept of support is highly important, with reference to the initial real state of the mother–infant relationship when the self of the latter has not yet been detached from the maternal care on which the infant is absolutely dependent in the psychological sense.

This leads to the establishment of the first object relations and the first instinctual gratification experiences as well as whatever includes and coexists with such establishment. Instinctual satisfaction and object relations are based on manipulation; the success of maternal care is the basis of the strength of the self, whereas the result of every failure in such care is a weakening of the self.

The younger the child, the more reliable the person must be from the perspective of the child. We know that, in these cases, only the love for the child makes such a person quite reliable. If we love the child and maintain an uninterrupted relationship with him/her, we will have won half the battle. Only a devoted mother may understand the child's needs (Winnicott, 2009, p. 39).

As for the Handling (Winnicott, 1996), the child is in permanent contact with the mother, feeling the closeness to the other who, along with the development, will begin to appear different and distant. Children not only feel their mother's closeness through her glance or lower voice, so typical within indigenous communities, but

they can also feel their mother's presence, throughout their whole body, chest to chest and face to face. This is connected to Winnicott's concept of Handling, which enables coordination and the experience of the body functioning and of the self. The Handling facilitates the baby's personalization.

It is obvious that human beings are not born with the capacity to regulate our own emotional experience but, instead, the baby is easily overwhelmed by emotions; consequently, a dyadic regulatory system is required whereby moment-to-moment changes are understood and responded to properly by the baby's caregiver in order to achieve such regulation.

Thus, the infant learns that any emotional arousal in the caregiver's presence will not cause disorganization because the caregiver is there to help the child to restore equilibrium by resorting to some appropriate behaviors.

However, maternal love is not a pure and ideal feeling, and it is neither simple nor without conflicts, as it usually seems to be represented in the collective imaginary. Maternal love is an ambivalent, complex, and ambiguous feeling featuring a combination of love and aggressiveness, cathexis and the recognition by the other, and the confusion with this other (Recamier, 1984; Oiberman, 2013).

Depending on how it develops, this mothering process allows the mother to offer herself as a secure bonding basis for the child. Bowlby (1989) stated that the mother's capacity to meet the baby's changing needs will allow the baby to have a relatively uninterrupted life line, as well as to experience states of non-integration and calmness, relying on an unreal support, together with repeated phases of integration, which are part of the baby's inherited tendency toward growth. The baby goes easily from states of integration to pleasant non-integration and vice versa, and the accumulation of these experiences makes up a model and creates a basis for the baby's expectations. The baby comes to believe in the reliability of the internal processes leading to integration into a unit.

As development progresses and the baby has already acquired an "inside" and an "outside," reliability in the environment turns into a belief, an introjection based on this experience of reliability. It could be said that the baby is not aware of the communication details but perceives the reliability effects resulting from continuous development. This is why it is important that the secure bonding basis is available and reliable vis-à-vis the needs of an immature psyche. The construct of early bonding reanimation that allowed for finding a therapeutic methodology for children without parental care has been developed on these theoretical bases.

Filiation and Absolute Motherhood in Parenting

Filiation can be explained as an experience of reciprocal belonging. Once established, this experience needs to be reassessed throughout the existence, at the core of a progressive process of mutual adoption between adults and children, even in the field of biological filiation. They delve into the adoption processes from the

transcultural perspective, approaching the concept of Narrative Filiation (Moro & Golse, 2019).

They study and conceptualize filiation in migrant groups, realizing that a child needs not only a genetic or a biological history but also a relational background being co-constructed between the child and the adult, as part of an active co-writing process.

The children's psychic maturation and growth, i.e., their development in the good sense of the term, as well as the developmental disorders, are always constructed in an inside-outside interface, i.e., at the exact intersection of the endogenous and exogenous factors. If we consider that the endogenous factors are the personal part of the child, then the term exogenous must include all the effects resulting from the encounter of the children with their environment, which are essentially unexpected and weave the plot of their personal relational history. Those are the encounters that make up the children's history and that will let them write their own history, co-authored with the adult (Moro & Golse, 2019, p. 48).

The abovementioned concepts and the field works carried out at the Wichi Community Tolaba Mission in Gral. E. Mosconi, Province of Salta, Argentina (Lucero, 2009), provided an approach to the parenting practices developed by the mothers that set the foundations for the therapeutic work called Early Bonding Reanimation.

It was observed that the Wichi children are under exclusive maternal care until the age of 4 years. This means that they receive maternal, paternal, and social education without the influence of the elements of another culture (Lucero, 2009). To delve into parenthood practices, we studied 20 mothers of children aged 6–24 months, out of which 17 belong to the Wichi-Mataca community in General Mosconi, Province of Salta; two are Toba mothers and the remaining mother belongs to the Chorote ethnicity, in the provinces of Formosa and Chaco, Argentina. The study focused on Delivery, Breastfeeding, Feeding, Sleeping, Playing, and Support, which are deemed to be exclusive maternal care categories in this community.

As regards the delivery, for most cultures, birth is considered to be one of the most important rites of passage in human life. The arrival of children in the world conditions the social reproduction and demands actions and rites aimed at incorporating them into society. This kind of rites has been conceptualized and are called the "material passages," the first of them being the transition experienced by the human being to become one, i.e., the passage through the maternal orifice (Bonte & Izard, 2008). Based on the mothers' narratives, the delivery is regarded as fundamental data in relation to the child's birth.

Breastfeeding has been regarded as one of the earliest explorative behaviors of the child, derived from the sucking reflex. This relationship between the mother and the breastfed baby produces a dynamic of interaction and mutual contribution between child and mother. We observed that, in general, Wichi mothers have no issues with breastfeeding. The breast is the body part that they give to children not only as a source of nourishment but also as a structural support. During

breastfeeding, most babies fall asleep, ease their anxiety, and even neutralize their irritability.

The support provided by Wichi mothers by carrying their babies all the time, in a ventral position, using neckwear, provides them with body-to-body support, leaving the primary feeding source (the breast) prevailing in these communities always available to the child. Holding the child in that position favors the mutual glance that creates a silent, unique, and personal bonding between her and her offspring. The child can then feel an integration with his/her mother from the very time of birth, feeling "grasped and supported" by the neckwear that the mother uses to hold and carry her baby as soon as the child is born. This is related to the concept of Holding (Winnicott, 1996), described as the action of grasping the child in a correct manner, which is connected to the mother's capacity to identify herself with her child.

Regarding Object-Presenting (Winnicott, 1996), we noticed that this function was led by the youngest women of the family. The results suggest that children share the act of playing with their peers, whether these are siblings or other children. Hence, we can imagine that there is an interaction and a relationship with the environment in place (Lucero, 2008). This differs from Winnicott's perception, in which the mother is in charge of presenting the objects. In short, the mothers from the indigenous communities surveyed provide their children with bodily support of great importance so that they can actively develop their motor skills.

Undeniably, when it comes to the body, mothers not only handle the children to make them feel safe, but that support also enables them to be themselves by actively exploring their environment and culture.

Therefore, the Wichi's absolute motherhood model gave origin to a clinical instrument aimed at reconstructing a mothering space also known as Early Bonding Reanimation in the psyche of young children with a lack of affection and a ruptured bond with the main caregiver.

Early Bonding Reanimation Program

Early Bonding Reanimation consists in the strategies used by an adult person in charge of a child who is in a condition of social vulnerability in order to make the child gain trust and communicational behaviors toward the surrounding people that could act as a support, thus strengthening the child's process of subjectivation and repairing some failures found in the development of psychic structuring.

It is understood as the restoration and repair of a bond that was drastically broken, resulting from the separation of the children from their biological parents and their further institutionalization.

We took as a model the parenthood practices observed in a Wichi indigenous community where the mothering process is based on the absolute psychic accessibility with the baby.

Its purpose is reassuring the children, to help them to regain the sense of relating to another person who won't disappoint them and will let them build a significant affective relationship.

With children who were living at foster homes and who had suffered a bond rupture within the first months of their lives, our job consisted in deconstructing the bonding maladjustment subsequent to the rupture and, together with the main dependable caregiver, to provide a healthy, singular, and repairing bond.

Early Bonding Reanimation: A Therapeutic Instrument

The RVT service emerges to meet the need for an approach and intervention in children under 3 years old, living in foster homes, whose results of psychomotor and cognoscitive development assessments showed indicators of risk and delay. With the use of the Gesell Dome, the RVT service was arranged at CIIPME (the Interdisciplinary Center for Research on Experimental and Mathematical Psychology) under CONICET (National Scientific and Technical Research Council).

We created a space where children could attend together with the operator in charge of their most transcendental care. That person was selected in order to be able to work on the child's dyadic bond, turning his/her caregiver into the secure basis for the development of the child's affection and relationships.

The babies assessed in the sample attended the Gesell Dome at CIIPME once a week, accompanied by a caregiver from the Institution. The task was carried out with the examiner and the caregiver, who was familiar to the child.

In the case of a baby, the assessment was made on the lap of the caregiver. If the child was 2 years or older, he/she was seated on a chair, next to the caregiver. The sample toys and elements were displayed on a table, facing the examiner.

The caregiver was asked questions about the child's history or situation, behavior at the Institution, and family bonding so as to add that information to the assessment, for example: The child was allowed to walk through the space and take the time to get acquainted with the site and the toys, so as to "gain confidence" with the new situation. Based on the test, the child was presented with the different elements according to the test, letting him/her explore and play with them, stopping the procedure in the case of anxiety or irritability.

Every child observed could deploy his/her potential within an exclusive environment. The child's situation could be framed, and the child could be personalized and removed from the collective care where he/she had been inserted, after having been deprived of the personalized maternal care prior to the his/her institutionalization.

Visualizing the Children and Their Subjectivizing Process: Summary of the Process Applied to Every Child

The population assessed included ten children hosted at Institutions and Foster Families, between 6 and 36 months old, who received a weekly 50-min session. We will describe two cases as a brief approach to the work carried out, as providing a detailed description of each case is impossible owing to the length required by each analysis. However, we can summarize both the process and the work performed with each child (see Table 6.1 in Appendix).

Child 1: Case M

M was admitted to the Institution 20 days after birth, the same day the baby was found after having been abandoned in one of the neighborhoods of the City of Buenos Aires.

After some time, the Argentine judicial system decides that M should start to establish contact with his biological parents, who were looking for the baby 1 year after the abandonment.

In the cognoscitive and psychomotor development assessments, M's percentiles suggested developmental arrest and delay.

Under these circumstances, we started treatment at the RVT service, at the age of 2 years and 10 months. M was under treatment until he was adopted. During the process, we accompanied the relational transition and the construction of a secure and reliable bond with the adopting family.

With M, we first worked on the construction of a secure and reliable relationship for his subsequent subjectivation within the framework of a secure bond.

Particularly in this case, it was the therapist who offered herself as a secure bonding basis for the child. Based on the work carried out with M, in the following cases, we needed to add a figure to act as a secure bonding basis. Later on, the therapist acted as a mediator and structured the child's bonding repair and construction work, with a third party acting as a secure bonding basis for the child.

M's biological parents were never able to accomplish the bonding. They kept appearing and disappearing, opening wounds of bereavement in the child that he wasn't able to heal. All the achievements made faded away in the losses resulting from the biological parents' lack of ability to sustain the relationship. The last report submitted by psychology to the court showed indicators of a progressive depression in the child as a result of the bonding inconsistencies with his biological parents, and pointed out that psychology would accuse the State of abandonment of person upon the lack of a ruling on the child's eligibility for adoption, as a result of which the adoption was finally ordered and, 60 days after this decision, the child met his current family, a same-sex couple, two mothers who adopted him lovingly as a son and today he "can be happy," as he usually says.

Child 2: Case Mg

Mg arrived at our service at the age of 13 months and with a cognoscitive and psychomotor development assessment, with percentiles indicating a severe delay. During the first session, the girl's difficulty in distancing from the other person became evident as any sign of temporary interruption of the caregiver's support destabilized her completely and she reacted with rocking movements, hitting her head and body on any surface, intense crying, constant drooling, and avoiding eye contact.

Within the weekly work protocol used with the children, we approached the motor, language, social, coordination, and cognoscitive areas, placing special emphasis on the bonding factor as a vital basis to develop such areas.

Mg's mother took care of her for 8 months and, during this time, she had prioritized holding her in her arms; thus, at the time of separating the child from her mother, the girl showed a mild deformation in her legs as a consequence of being always held in her mother's arms and standing on her hip. On the other hand, after being separated from her biological mother, the caregiver reported that she needed to be sanitized thoroughly for a month to remove all the spots from her body because her cleanliness was very deficient.

Mg's situation as it was became very complex to deal with because she came from a very symbiotic relationship with her mother and had been separated from her when she was 8 months old, achieving in this way the dreaded crisis of the 8th month with its subsequent anxiety. However, Mg was apparently at an even more primitive evolutionary age. Her behaviors and disorganization showed that Mg was experiencing the paranoid-schizoid phase described by Melanie Klein (1962). This involved carrying out a bonding repair and reanimation work, which should consider the evolutionary bonding age of the child and should let us outline a new path toward the effective fulfillment of the different evolutionary stages of the early psyche.

Early Bonding Reanimation: Transcultural Instrument for the Treatment of the Psyche

The therapeutic transcultural intervention called RVT (Lucero & Oiberman, 2018) for children under 3 years old, which emerged from the conceptualization of syntonic and synchronous mothering researched at Wichi communities, facilitated the emotional and psychic restructuring in young children without parental care.

The efficacy of the intervention was observed in these children's various achievements, not only in their cognoscitive and psychomotor development but also in their psychic repair.

Furthermore, the RVT lets the caregiver instill a feeling of trust in the child, communicating: "you won't be left alone…" or "I will take care of you only." A healthy, unique and repairing bond is the result of the deconstruction of the subsequent relational maladjustment due to the rupture, and of the joint work with the main dependable caregiver. Constructing a healthy bond not only allows for a subjectivizing process that is essential for the child's psychic development, but it also enables the integration of constitutional traits that intervene in the child's cognoscitive and psychomotor development, allowing for an intense exploration of the surrounding and its subsequent interpretation. This gives rise to the formation of cognoscitive structures, impacting on the child's affective-social development and enabling the kid to build relationships with other people, thus broadening and enriching the socialization process. Similar to cardiopulmonary resuscitation being a method of restoring physical life to someone, RVT restores the psychic life and the possibility of a subjective constitution to vulnerable children lacking early bonds in their existence, which are both founding and fundamental.

The absolute mothering model let us create an innovative clinical instrument that allows for the reconstruction of a mothering space in the child's psyche. Its purpose is to reassure the children in order to recover the sense of relationship with another person who will not disappoint them and will let them build a significant affective relationship.

The younger the child, the more reliable the person has to be from the perspective of the child. We know that, in these cases, only the love for the child makes such a person quite reliable. "If we love the child and keep an uninterrupted relationship with him/her, we will have won half the battle" (Winnicott, 2009, p. 39).

Final Considerations and Prospects

The efficacy of the intervention is observed in the different achievements of the children, who were studied not only for their cognoscitive and psychomotor development but also in the repair of their psyche.

In our country, the therapeutic work with children in this or a similar situation hosted at Institutions and Foster Families sped up the adoption processes as the judicial system receives tools that help to analyze and consider decisions that have a direct impact on the lives of the children, especially during their early development.

It is important to point out that this project was approved to be added to the National Bank of Social and Technological Development (*Banco Nacional de Proyectos de Desarrollo Tecnológico y Social*) under the National Secretariat of the Government of Science, Technology, and Productive Innovation (*Secretaría de Gobierno de Ciencia, Tecnología e Innovación Productiva de la Nación*).

In short, in Argentina, the work performed has allowed us to restore the individuality in each child, remove the collective parenting, assess the outreach, benefits, and problems brought about by collective parenting, letting children express themselves through their own body language.

On the other hand, the unprecedented collaboration between a research agency and an entity in charge of executing children's rights in the City of Buenos Aires has promoted knowledge and actions in the field of child development, including a bio-psycho-social approach to early childhood based on the available evidence and on an anticipatory look at damage and prevention, with a view to reducing developmental delay and inequality gaps.

We hope that, in the future, this therapeutic model for children without parental care may be developed in other Latin American countries, giving birth to new successful parenting models.

For Latin America, this work has allowed us to develop and implement an innovative approach to cognoscitive and psychiatric health for the purpose of ensuring the psychiatric health in children without parental care up to 6 years old. This approach should facilitate the subjectivation and individualization of each child, providing tools and assisting the team and caregivers with a different outlook to emotionally support that child, and also helping the Institution to become a facilitating environment.

Our desire is that this model may be replicated in other regions of Latin America, as these populations experience, at an early stage, the discontinuity of family figures, are subject to rights' protection measures, and live in Institutions that provide comprehensive care under collective parenting models. These situations may be potentially traumatic and require intensive and unique accompanying work to repair the suffering while ensuring the optimal environmental conditions for improved development.

Appendix

Table 6.1 The tests and treatment procedures have provided the following data

Child	Age at the beginning of the treatment	EEDP EAIS at admission	RVT Interventions	Length of treatment	Achievements by the child	Discharge
Child 1	2 years, 9 months	Delay	Establishment of the therapist as a secure bonding basis for the child	4 years	Internalization of the body scheme	Determination of eligibility for adoption
			Body-to-body support during all the given ludic situations		Language acquisition	Adopted
			Simple verbalizations in low tones		Socialization with peers and adults	
			Absolute accessibility, through interventions in the Institution, in daily situations of the child's life		Processing of bereavement caused by repeated situations of neglect	
					Reediting of the psyche	
Child 2	13 months	Delay	Incorporation of the caregiver as a secure bonding basis	1 year	Incorporation of language	Determination of eligibility for adoption
			Experiencing of the paranoid-schizoid position fusion phase		Processing of anxiety	Adopted
			Joint work with the caregiver to replicate interventions in the Institution		Socialization with peers and adults	
			Experiencing of the depressive position		Emotional security	
			Experiencing of separation anxiety		Symbolization processes	
			Incorporation of the transitional object		Repairing and reediting of the psyche	

(continued)

Table 6.1 (continued)

Child	Age at the beginning of the treatment	EEDP EAIS at admission	RVT Interventions	Length of treatment	Achievements by the child	Discharge
Child 3	13 months	Risk	Incorporation of the caregiver as a secure bonding basis	3 years	Incorporation of language	Determination of eligibility for adoption
			Cognoscitive stimulation		Processing of anxiety	Adopted
			Language stimulation by promoting the child's autonomy in the ludic space on the basis of the support of absolute psychiatric accessibility		Socialization with peers and adults	
			Translation of the child's emotional states		Adjustment of the cognoscitive achievements to the child's age	
			Processing of the child's brotherly bonds		Emotional security	
					Repairing and reediting of the psyche	

(continued)

Table 6.1 (continued)

Child	Age at the beginning of the treatment	EEDP EAIS at admission	RVT Interventions	Length of treatment	Achievements by the child	Discharge
Child 4	3 years old	Delay	Incorporation of the caregiver (male) as a secure bonding basis and as an operator of limits and regulations	3 years	Organization of emotions through symbolization	Determination of eligibility for adoption
			Setting of limits		Cognoscitive achievements close to the child's chronological age	Adopted
			Stimulation of the tolerance to waiting		Processing of anxiety	
			Support and experiencing of anxiety through absolute psychiatric accessibility		Socialization with peers and adults	
			Cognoscitive stimulation			
			Stimulation of symbolization			

(continued)

Table 6.1 (continued)

Child	Age at the beginning of the treatment	EEDP EAIS at admission	RVT Interventions	Length of treatment	Achievements by the child	Discharge
Child 5	2 years old	Delay	Incorporation of the caregiver (male) as a secure bonding basis and as an operator of limits and regulation	3 years	Organization of emotions through symbolization	Determination of eligibility for adoption
			Setting of limits		Cognoscitive achievements close to the child's chronological age	Adopted
			Stimulation of the tolerance to waiting		Processing of anxiety	
			Support and experiencing of anxiety through absolute psychiatric accessibility		Socialization with peers and adults	
			Cognoscitive stimulation			
			Stimulation of symbolization			
Child 6	3 years old	Risk	Incorporation of the caregiver as a secure bonding basis	3 years	Processing of anxiety	Determination of eligibility for adoption
			Emotional security indicators		Emotional security	Adopted
			Stimulation of the tolerance to waiting		Cognoscitive achievements close to the child's chronological age	
			Absolute psychic accessibility in the translation of the child's emotions			
			Cognoscitive stimulation			

(continued)

Table 6.1 (continued)

Child	Age at the beginning of the treatment	EEDP EAIS at admission	RVT Interventions	Length of treatment	Achievements by the child	Discharge
Child 7	18 months	Risk	Incorporation of the caregiver as a secure bonding basis	2 years	Emotional security	Determination of eligibility for adoption
			Construction of the alert statuses		Inhibition of impulses	Adopted
			Detection of emotional insecurity indicators		Symbolization of emotions	
			Cognoscitive stimulation		Incorporation of language	
			Triadic game design: Caregiver-Child-Therapist		Processing of anxiety	
			Stimulation of the tolerance to waiting through absolute psychiatric accessibility		Repairing and reediting of the psyche	

(continued)

Table 6.1 (continued)

Child	Age at the beginning of the treatment	EEDP EAIS at admission	RVT Interventions	Length of treatment	Achievements by the child	Discharge
Child 8	20 months	Risk	Incorporation of the caregiver as a secure bonding basis	1 year	Incorporation of language	Determination of eligibility for adoption
			Assessment of the relationship built with the emotional reference person		Processing and resignification of the bond with the emotional reference person	Adopted
			Intervention in the bond between the child and the emotional reference person		Socialization with peers and adults	
			Suspension of the bond with the emotional reference person		Processing of anxiety	
			Processing of loss with support to anxiety through absolute psychiatric accessibility		Repairing and reediting of the psyche	
			Cognoscitive stimulation			
			Stimulation of language and symbolization processes			

(continued)

Table 6.1 (continued)

Child	Age at the beginning of the treatment	EEDP EAIS at admission	RVT Interventions	Length of treatment	Achievements by the child	Discharge
Child 9	3 years old	Risk	Incorporation of the biological mother for biological bonding reanimation	1 year	Processing of the relationship with the biological mother	Determination of eligibility for adoption
			Assessment of maternal capabilities		Psychic repair by building a bond of tenderness and trust with the emotional reference person	Adopted
			Processing of hostility toward the biological mother		Socialization with peers and adults	
			Absolute psychiatric accessibility of the emotional reference person		Symbolization of emotions	
			Request to remain with the emotional reference person			

(continued)

Table 6.1 (continued)

Child	Age at the beginning of the treatment	EEDP EAIS at admission	RVT Interventions	Length of treatment	Achievements by the child	Discharge
Child 10	2 years old	Risk	Incorporation of the caregiver as a secure bonding basis	Began in November 2020, still in progress	Socialization with peers and adults	Resolution pending
			Assessment of maternal capabilities		Processing of anxiety	
			Stimulation of the tolerance to waiting and to frustration			
			Support to anxiety through the absolute psychiatric accessibility			
			Respect for the child's resolution time, accompanying the child's anxiety, as a symbolization process			

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Part II
Looking at Adolescent Development from a Systemic Approach

Chapter 7
Growing up in Adverse Family Contexts: Risks and Resources for Adolescent Development

Blanca Estela Barcelata Eguiarte

Introduction

Childhood and adolescence are crucial periods of the life cycle and the basis of the ulterior stages of human development. The World Health Organization (2020) estimated that more than 30% of the worldwide population are children and adolescents. The healthy development of children and adolescents depends on diverse supportive systems in which they grow, such as family, school, and community. Positive adolescent development involves connecting with others and establishing positive relationships, dealing with normative and non-normative situations, solving problems, and learning to manage emotions. Despite adolescents being considered a healthy group, between 10% and 20% of adolescents in the world experience mental disorders; however, they are not diagnosed and only around 9% of them receive some type of treatment. In Latin America, adolescents represent 30% of the population, and most psychological development issues are associated with adverse conditions such as poverty. Children and adolescents from lower socioeconomic levels living in urban, suburban, and rural settings are the most vulnerable; thus, researchers and practitioners have been addressing their development from different perspectives.

Latin America represents a wide range of cultural contexts that frame the development of children, adolescents, and families; nevertheless, some macro-structural conditions such as poverty seem to be a common factor, linked to high marginalization and low human development rates, of a significant population percentage in the area. In the Americas, around 10% of people have 48% of the global income,

B. E. Barcelata Eguiarte (✉)
Faculty of High Studies Zaragoza and Faculty of Psychology, National University Autonomous of Mexico, Mexico City, Mexico
e-mail: bareg7@comunidad.unam.mx

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whereas the poorest 10% only have 1.6%, which implies inequitable opportunities for the development of families, children, and adolescent in many countries (e.g., Brazil, Bolivia, Chile, Guatemala, Ecuador, Nicaragua, Peru, Argentina), including Mexico, where even the urban poverty has also shown an increase of around 40% to 59%, depending on the measurement method used (Boltvinik & Damián, 2016; Salinas et al., 2018).

These living conditions imply multiple adversities associated with pressure and stress for most Latin American families who mostly have children and adolescents. In the last decade, 51.7% of the population was living in poverty, and also the rate of urban unemployment in Latin America from 1998 to 2006 was 10.4%, (CEPAL, 2018; UNICEF, 2021), resulting in parent migration, increasing the informal economy and the consistent incorporation of women and family mothers to the "productive" country economy. Therefore, the "traditional family" setting has suffered transformations giving way to new family structures to face the imperatives of globalized world requirements. In the 1970s, in Latin America, the family was formed by the father, generally, as provider and head of the family, whereas the mother was the primary caregiver and was responsible for raising the children (Kliksberg, 2015). In addition, the current COVID-19 pandemic has contributed to rising poverty in low and lower- middle income countries (LMICs) in the world including Latin America (World Bank, 2021). On the other hand, in Mexico, the National Institute of Statistics and Geography (INEGI, 2018) reported that around 97 million people live in families, of which 65 million are nuclear, 30 million are extended families, and two million people live in other kinds of families, suggesting that structures and family functioning continues to change, influencing directly or indirectly the developmental trajectories of its members. On the other hand, Mexico's National Population Council (CONAPO, 2015), highlights an increase in the number of Mexican homes that are provided by mothers and that 40% of households are economically supported only by women.

From science of development and relational developmental systems theories and ecological perspective (e.g., Cicchetti, 2010; Lerner et al., 2013; Sameroff, 2010), particularly, from the ecological-transactional model, understanding the trajectories and adaptation outcomes of adolescent development requires considering the context in which the adolescents live. Thus, poverty is a distal contextual factor that represents a risk for adolescent development. Recurrent economic crises in Latin America have affected families and adolescents, implying multiple risks and challenges, increasing their vulnerability. However, evidence shows that adolescents are capable of showing good adaptation, facing stress, risk, and adversity depending on the interplay of personal and family factors maintaining mental health and well-being. Thus, the objective of this chapter is to present a theoretical-conceptual analysis of adolescent development from classic and new research, showing evidence that personal and family characteristics are associated with both adaptive and maladaptive processes in adverse contexts. Findings in Latin America are presented, as well as results from a large project with Mexican adolescents from risky contexts, related to poverty and marginalization, facing stress and adversity.

An Overview of the Ecological-Systemic Framework of Adolescent Development

Developmental science is a broad multidisciplinary field including the intersection of diverse social and health disciplines such as psychiatry, psychology, education, and neurosciences, integrating diverse theoretical and methodological paradigms (Lerner & Steinberg, 2009). The purpose of the science of development is the understanding of the complex variability of developmental trajectories and outcomes of children, adolescents, and families in diverse conditions and contexts (Lerner, 2018; Masten, 2015). Research on child and adolescent development has been changing, and many theoretical and methodological models have emerged, most of them based on the ecological-systemic perspective (Bronfenbrenner, 1986) and the relational development systems theories (e.g., Overton & Lerner, 2014). Developmental researchers (e.g., Cicchetti, 2013; Lerner et al., 2013; Masten, 2018; Sameroff, 2010) have focused on the complex interaction of individual and context to understand adaptive and maladaptive developmental outcomes in both diverse normative and non-normative situations. Longitudinal and cross-sectional investigation have provided multi-causal and multi-level models for understanding the underlying mechanisms involved in the variability of developmental trajectories and outcomes across domains, times, places, and cultures (Catalano et al., 2017; Conger et al., 2010; Goodrum et al., 2020; McDonald et al., 2020; Wadsworth et al., 2013).

Research has provided evidence to understand that adaptation and resilience are dynamic processes that imply the interplay of a set of risk-protective personal and contextual factors across proximal and distal ecological levels, in which family is a proximal factor playing a central role in adolescent development (Masten & Monn, 2015; Sameroff & Rosenblum, 2006; Walsh, 2016). From a developmental system viewpoint, the family has been defined as:

1. A natural group with a systemic structure defined from a complex relational context with changing interactions among its members (Minuchin et al., 2007).
2. A self-regulatory system able to adapt to diverse individual and family normative and non-normative events of either individuals or the entire family across its own life cycle (McGoldrick et al., 2016).
3. A semi-opened system in interaction across external ecological systems (Bronfenbrenner, 1986).

Therefore, family functioning is a complex process, resulting from transactional rules between its members, in a dynamic interaction between change and continuity (McGoldrick et al., 2016; Minuchin et al., 2007; Patterson, 2002). Furthermore, there are many theoretical and empirical models regarding family functioning, some of them focused on normal and transitional processes and others trying to explain family functioning in extraordinary and stressful situations. Olson's Circumflex Family Model (Olson, 2000; Olson & Lavee, 2013)) underlines as central mechanisms: cohesion, communication, flexibility, and conflict and problem solving, as they are linked to adaptive and non-adaptive children and adolescent outcomes

depending on the characteristics of each one of them. For instance, high to moderate levels of cohesion contribute to enhancing the developmental tasks during adolescence and accomplish a sense of own identity and belonging (McGoldrick et al., 2016), whereas an over-involvement, or, on the contrary, an emotional disengagement can be displayed in adolescents as a false sense of independence; thus, they could perceive it as parents' neglect and lack of support (Minuchin et al., 2007). To understand family functioning and adaptation processes in thriving adverse situations, family stress models such as the "ABCX" (McCubbin & McCubbin, 2013) and the family stress theory (McCubbin & Patterson, 1982), as well as the theory of family resistance (Patterson, 2002), have been useful theoretical-methodological frameworks to explain how some families react in daily and extraordinary situations supporting their children to face critical and stressful experiences across the life cycle (Amfani-Joe, 2012; Walsh, 2016).

On the other hand, according to assumptions of family communication patterns theory (Koerner et al., 2017; Schrodt & Shimkowski, 2017), the communicational patterns among family members reflects family functioning, including parenting styles. As communication involves digital and analog communication, the perception of the relationship between adolescents and parents plays an important role during adolescence (Ebbert et al., 2019; Soenens et al., 2019). Moreover, communication covers a symbolic, instrumental, and emotional function, supporting the development and mental health of adolescents. Family adaptability or family flexibility is another mechanism to help the family to fit and react in a proper way to transitional changes and challenges of the life cycle; moreover, it is the ability to face situational stress, non-normative life events, or adverse situations in the lives of the family or its members (McGoldrick et al., 2016; Olson & Lavee, 2013). These mechanisms involve organizational rules helping to accomplish the developmental tasks and enhancing family to adapt to daily life, as well as to significant transitional changes.

Adolescent Development in Adverse Contexts: Beyond Adaptation

For decades, developmental ecological-systemic approaches have considered that poverty is a distal risk factor associated with other proximal risk factors including family, in cumulative cascade processes affecting the trajectories and outcomes of children and adolescents (Evans & De France, 2021; Duncan et al., 2015; Garmezy, 1991; Masten & Cicchetti, 2010; Rutter, 2012; Sameroff, 2010). These risky processes linked to disadvantaged backgrounds can go on across generations, such as maltreatment and child abuse (Thornberry & Henry, 2013; Russotti et al., 2021), negligent parenting and domestic violence (Riley et al., 2017; Suh & Luthar, 2019), parental and family conflicts (Wadsworth et al., 2016), as well as antisocial behavior (Catalano et al., 2017; Moffitt, 2017) and risky behaviors in adolescence, such as

drug abuse (Handley et al., 2015). Thus, family issues are basic factors in the developmental and adaptation processes of children and adolescents (Soenens et al., 2019). However, the investigation has been moved from search markers of risk to search promotive and protective factors involved in risk-protective mechanisms, encompassing positive adaptation of adolescents under adverse conditions (Gaylord-Harden et al., 2010; Luthar, 2006; Rutter, 2012; Sameroff, 2009). Therefore, the study of resilience has been structured around some key concepts such as adaptation, multifinality, equifinality, protection, risk, stress, and adversity (Cicchetti, 2013; Luthar, 2006; Masten & Cicchetti, 2016).

Adaptation has been defined in many ways, in terms of external adaptation involving successful functioning in all domains, such as academic achievement, prosocial behavior, and social competence according to an external criterion, or internal adaptation involving well-being (Masten, 2015; Masten & Obradović, 2006). Likewise, a positive adaptation involves cognitive, emotional, and social regulation processes that translate into good functioning according to what is expected for a given age period and cultural context (Burt et al., 2008; Masten & Tellegen, 2012). Adolescent adjustment or adaptation also used to be associated with the absence of significant emotional and behavioral problems and psychopathology according to a standard (Achenbach, 2015; Luthar, 2006). It should be noted that one can be competent in some domains and fail in others; however, failures in core domains, such as social competence, can lead to psychopathology (Masten & Cicchetti, 2010, 2016). In sum, three criteria can be considered adaptation:

1. The presence of certain competencies according to the developmental tasks.
2. Good functioning within a norm and a cultural context,
3. Absence of significant emotional and behavioral problems or psychopathology.

Therefore, resilience goes beyond adaptation to ordinary situations; it implies positive adaptations under adverse, stressful, and risky situations that regularly involve non-normative or unexpected events in the adolescent and family life cycle (Infurna & Luthar, 2018; Masten & Cicchetti, 2016).

Hence, there are many explanatory models of resilience; most of them assume that development involves an interplay between diverse, proximal, and distal risk, and protective factors across ecological systems. The compensation model of resilience (Masten, 2015), inoculation stress theory (Malhi et al., 2019; Rutter, 2013), and the cumulative cascade risk (Burt et al., 2008; Evans & De France, 2021; Rutter, 2012), seems to be more useful approaches to understanding adaptation and resilience, as well as psychopathology in adolescents living in adverse contexts such as poverty. Research with adolescents from vulnerable population and risk contexts (e.g., Handley et al., 2015; Moffitt, 2017; Santiago et al., 2012) has identified issues associated with family functioning, such as: low socioeconomic status (SES); low level of schooling parents schooling; low parent occupation profiles; low living standard; unemployment of the main provider; lack of stability in the family configuration; mental illness precedents in some of the parents; sexual abuse; intrafamily violence; antisocial behavior and crime; alcohol and drugs in the parents;

and suicidal behavior precedents in the family that tend to increase the effect of other internal or external stress sources, creating a synergistic effect and giving rise to discontinuities in adolescent development.

Moreover, families from poverty backgrounds imply different levels of risk as there may be a source of multiple stressful events, and on the contrary provide few sources of protection. Diverse studies (e.g., Conger et al., 2010; Golberstein et al., 2019; Leventhal & Brooks-Gunn, 2000; Sameroff & Rosenblum, 2006) indicate a set of useful sociodemographic markers to identify poverty: family income level; schooling and occupation of the parents; mother's age at the first pregnancy; and family structure and size. The negative impact of stress, adversity, and traumatic experiences within the family on adolescent development has been widely documented. Neglected or maltreated children are more likely to develop biological and psychological problems, for instance, depression, drug abuse, and antisocial behavior (Bacchini et al., 2011; Cicchetti & Handley, 2019; Riley et al., 2017); as well as the physical and sexual chronic child and adolescent negative life events in the family (e.g., by relatives or parents), which are associated with severe depression, self-harm, and suicidal behavior (Olshen et al., 2007; Paul, 2018).

Multifactorial research aimed at studying adolescents and families mechanisms of adaptation with low economic resources and conditions of poverty (e.g., McDonald et al., 2020; Perzow et al., 2018; Santiago et al., 2012; Santiago & Wadsworth, 2009), include individual and family factors such as adolescent, parental, and family coping strategies, as well as other aspects linked to the poverty context, such as support networks, characteristics of the neighborhood (Sanders et al., 2017), that can arise among the risky conditions, showing that these can also be protection factors and give positive endings as a result; such is the case of coping, the perception of the life events, and the social support. Therefore, the family system represents a context of multiple factors across multiple-level systems, operating on a continuum of risk and protection, for example, the parental support and a family climate can lead to either adaptive or maladaptive outcomes (Aaron & Dallaire, 2010; Conger et al., 2010). Many adolescents living under conditions of poverty grow up in a troubled family environment with communication difficulties, a low level of support, and cohesion, associated with emotional problems (Rodriguez et al., 2015). Families characterized by the absence of parenting support and negative parenting practices enhance internalizing and externalizing problems (Razavi & Razavi, 2014; Schleider & Weisz, 2016; Smokowski et al., 2015). In contrast, family cohesion (Goodrum et al., 2020), flexible communication patterns (e.g., Schrodt & Shimkowski, 2017), and positive parenting practices (Karreman et al., 2009; Soenens et al., 2019; Smokowski et al., 2015) have been protective factors linked to resilience.

Stress models particularly related to economic strains (e.g., Conger et al., 2010; Duncan et al., 2015) propose that family economic conditions contribute to explaining how low SES and economic hardship can directly or indirectly impact adolescent development through the deterioration of marital relations and parenting. Based on the model of Conger's model (Conger et al., 2010), recent studies have focused on understanding the complex relationship between poverty, family stress,

and mental health and psychopathology in adolescence (e.g., Evans & De France, 2021; Kim et al., 2016; Wadsworth et al., 2016). They have tested several models showing that children and adolescents can display diverse trajectories depending on the combination of family and individual factors in which coping plays a central role, moderating the economic pressures on adolescent outcomes (Amfani-Joe, 2012; Wadsworth et al., 2013). They also show that disengagement coping is linked with internalizing and externalizing problems (Evans & Kim, 2013; Santiago et al., 2012), whereas engagement coping can be a moderator even of the family difficulties, as well as the economic pressure and adolescent outcomes (Santiago & Wadsworth, 2009), moderating the negative effect of the poverty and marital conflict, contributing to the mental health of adolescents.

In summary, living in poverty-stricken neighborhoods and with economic hardship frequently imply growing up in an at-risk family context, within a cascading risk process. It is likely that adolescents having to deal with multiple stressful events with medium- and long-term consequences in diverse domains, for instance, affecting neuropsychological development (e.g., executive functions), and likely producing negative pathways and maladaptive outcomes (Buckley et al., 2019; Evans & De France, 2021; Handley et al., 2015). Nevertheless, the neurobiological and behavioral plasticity during adolescence contributes to good adaptation despite risk and adverse experiences, which means that they are resilient (Evans & Kim, 2013; Masten, 2018; Rutter, 2012). Family can give support to an adolescent with a low level of achievement or who was assaulted. In this process, the family can be crucial for positive adaptation or resilience. Nevertheless, there are also variables in the "individual system" that can help to minimize the negative effect of parental and family stress on adolescent outcomes. For example, coping and perceived social support are essential individual resources as they assume a mediating role between distal factors such as poverty, as well as the crisis and family conflict situations and the adaptation of adolescents.

Moving Toward Resilience: Findings in Latin America

The global economic crisis in many countries, especially those of Latin America, considered by the World Bank (2021) as LMICs, have influenced the instability and drop in family income that has caused family members to mobilize to increase their economic capacity. This situation has produced changes in the organization of society and the family dynamic, for example, an increase in the participation of women in the household income, sharing economic responsibility with husbands or couples. Likewise, these changes have led to unemployment and migration, with consequences for the family system, such as economic hardships, school drop-out, families with single parents, divorce, maltreatment, orphanhood, parental neglect, abuse, and maltreatment. In many Latin American countries, the recurrent economic crises have generated a situation in which many families are inserted into what is known as the "poverty circle" proposed by Birch and Gussow (Garmezy, 1991), as

poverty represents a chronic stressor associated with other adversities in a cascading process, as Rutter indicates (Rutter, 2012). Hence, the families must face diverse environmental challenges, many of them, in turn, linked to risk factors of the macrosystem such as poverty, social exclusion, low human development indexes (HDIs), kidnaping, displacement, migration, violence, delinquency, and crime (UNICEF, 2021). Kliksberg' studies in Latin America (Kliksberg, 2015) show multiple structures and types of families, most of them living in marginalized settings and facing diverse stressful events. In spite of this, Latin American families and adolescents seem to be able to overcome adverse experiences, showing good adjustment.

Macro-structural factors (e.g., social, economic, and political issues), such as lack of a job and opportunities to grow, a low index of development, violence, and delinquency, are a few problems associated with Latin American poverty and marginalized contexts. Therefore, the configuration and dynamic of families, have been changing and adapting over time, thriving adversities and being resilient in most cases. A nuclear or intact family is no longer the most frequent type of family; the single-parent configuration has become common, as well as extended families, trying to cover specific and contextual needs of Latin American families. The question is, how do adolescents and families face these situations? The answer is not quite simple, as it involves multiple domains, and multilevel and multi-perspective research that requires longitudinal or complex cross-sectional designs to be conducted.

In the last few decades in Latin America, under the large umbrella of "Developmental Science," research from an ecological-systemic perspective has expanded, showing the importance of family context in child and adolescent outcomes (e.g., Acevedo & Hernandez-Wolfe, 2020; Ierullo, 2015; Tapia et al., 2012). The chronic nature of poverty makes it a major risk for the development of adolescents living in multi-problem Latin American families. The more frequent family difficulties are related to divorce, economic hardship, negligent parenting, family violence, behavioral and emotional problems, and migration; most of them are related to the most prevalent mental health problems, such as alcohol abuse, use of drugs, anxiety, depression, and suicide (Pan American Health Organization (PAHO), 2021), nevertheless, many adolescents grow up showing good adaptation and resilience.

Regarding violence, Colombian research highlights the importance of family cohesion and the sense of belonging of adolescents in circumstances such as violence and displacement, or under economic pressures and unemployment (e.g., Acosta et al., 2019), illustrating that adolescents' perception of the family union can help to deal with these kinds of negative situations. Additionally, studies in Mexico with the rural and marginalized population (e.g., indigenous groups versus mestizo group), reported that family cohesion and parental warmth relationships were related to a better lifestyle and well-being, with the mestizo group scoring higher than the indigenous group and also showing better adjustment levels (Campos-Uscanga et al., 2018). Recent research with Chilean marginalized youth facing a disaster situation (Salgado & Leria, 2018) observed that exposure to violence, housing deterioration, and job loss were the strongest predictors of psychopathological

symptoms such as depression, anxiety, somatization, obsession-compulsion, although positive reactions were also observed such as problem solving.

Studies in Colombian families, facing various adverse situations reported that 57% of families in marginalized settings are at risk either because of their economic situation and/or conflictive family relationships (e.g., Giraldo, 2014); likewise, concern risk families, it is reported that 40.7% are functional families, 27% presented mid-family dysfunction, 20.8% show moderate dysfunction, and 11.7% severe dysfunction (Rueda et al., 2010). Moreover, forced displacement is a psychosocial problem also associated with 24% of mental health disorders, including suicidal ideation; however, adolescents also presented resilience, with good family functioning and social support the most important protective factors (Cardozo-Rusinque et al., 2013). In many cases, active coping and social and family support, for example, helped to deal with stressful family events, such as divorce or child separation (Arrieta et al., 2012; Cadavid & Amarís, 2007). Findings with Ecuadorian families showed that low or poor functioning with negative communication patterns, characterized by low negotiation as well as disengagement structures are related to behavioral problems, such as alcohol and drug abuse in adolescents than families with higher levels of functioning (Ramírez & Andrade, 2005; Sigüenza, 2015).

Family issues related to poverty, low economic status, parents' educational and cultural resources, are associated with parenting problems in Mexican troubled adolescents. Parents of adolescents with depressive symptomatology present parenting practices mainly characterized by psychological control and rejection (Andrade et al., 2012). Conversely, positive parenting practices, such as open communication, and a warm parental relationship, have been associated with a lower number of internalized and externalized problems and mental health (Betancourt & Andrade, 2011; Méndez et al., 2013; Ruvalcaba et al., 2016). Besides, a positive family climate and positive parenting have been associated with better academic-social adjustment in school and clinical adolescents of low SES (Márquez & Barcelata, 2016), whereas low academic profiles were associated with rejection as the main parenting practice (e.g., González et al., 2017). Regarding competence and resilience with Mexican teenagers living in rural and urban poverty, for example, social behavior was predicted by social competence and positive family, and peer support (Palomar & Victorio, 2018), whereas the main predictors of academic success were the father's parenting practices, such as behavioral control, and warm and supportive family relationships (Palomar & Victorio, 2017). On the other hand, high levels of internalizing and externalizing behaviors were associated with more stressful events and a high level of negative parenting, with the lowest levels of personal resources in adolescents living in a rural area (Palomar & Victorio, 2016).

Previous reviews examining family processes (e.g., Ramírez & Andrade, 2005; Rodríguez et al., 2007) also suggest that family cohesion with a higher level of parental communication might increase resilience in adolescents, comparing users and non-users of drugs. For instance, low parental control and supervision with a negative family climate were also linked to delinquency in adolescents (Carrillo et al., 2016). Conversely, in Mexican adolescents with a low SES and suicidal risk, social support, union, and family support were protective factors (e.g., Rivera &

Andrade, 2006); however, personality can also be a protective factor in adolescents with multiple stressful life events and with suicidal behavior (Arenas-Landgrave et al., 2019); thus, intervention programs have been developed to promote resilience in the school setting. Findings in Peruvian families (Villarreal & Paz, 2017) showed similar results, supporting the notion that cohesive and flexible families might promote adolescent resilience.

Migration is another important issue affecting the development of adolescents, parents, and families in Latin America as it forces displacements and leaving home in search of a better quality of life. Experiences of ambiguous losses in adolescents who remained in the origin country, with one or both parents migrating were examined by Jerves et al. (2020). For instance, the absence of a father in immigrant Mexican families in the USA was the stronger factor for stress than other variables (Falicov, 2012). Linked to migration in Mexican people, mothers have left home, assuming new roles to face economic, and social challenges, with grandparents becoming the main caregivers of children and adolescents (Pick et al., 2011). Nevertheless, many family dynamics of Mexican migrants are characterized by cohesion of the family, social, and community support climate, promoting individual and family resilience (Rivera et al., 2013; Vidal de Haymes et al., 2011).

Finally, it is worth mentioning recent research in the field of resilience based on Bandura's Social Learning Theory. Acevedo and Hernandez-Wolfe (2020) take up the construct of "vicarious resilience" (Hernandez-Wolfe, 2018) to understand how Colombian families can help each other through experiences of observational learning. Their work with community mothers, which provides mutual assistance, as well as to their children, and their own families, is an example of the usefulness of the systemic-ecological perspective as a framework for multilevel research of adolescent developmental trajectories and outcomes, and for designing evidence-based intervention.

Findings from "Health, Adolescence, and Family Research" and Further Directions

Some of the findings presented below come from a large research project with Mexican adolescents and families as part of a multidisciplinary research group "Health, Adolescence, and Family," composed of psychology, psychiatry, and education researchers from the National Autonomous University of Mexico (UNAM) in collaboration with other educational and mental health institutions. Some studies have been supported by the Program for Research and Technological Innovation Projects (PAPIIT-UNAM), integrating diverse studies across years. This work has been carried out from the developmental perspective, particularly from an ecological-systemic macro-paradigm. Most of the studies have included adolescents from 12 to 21 years old and families from multiple contexts and risk conditions, predominantly from the metropolitan area of Mexico City and suburban bordering states,

characterized by a low index of development ranking, according to the availability of health and educational services, infrastructure, and housing, as well as the quality level of the urban environment (CONAPO, 2015). Some general questions that have guided our studies on the adaptation and resilience processes of adolescents and families with different poverty-based adversities (e.g., Barcelata & Márquez, 2017): How do they experience or perceive their socioeconomic condition? What is the key risk-protective factors involved in adaptation and resilience? How do these factors work in different risk contexts? In addition to intrinsic risks of poverty, what other types of adversities do adolescents and families experience? Can risk-protection "profiles" be established? How might an intervention change negative developmental trajectories and improve resilience in disadvantaged youth and families, given the complex contexts of poverty? Thus, Fig. 7.1 presents a general scheme with some variables involved in our research regarding adolescent outcome in family and poverty contexts presented in this chapter.

Hence, we have conducted cross-sectional studies with community and clinical groups living in urban and sub-urban poverty settings based on ethical principles for investigation (Sociedad Mexicana de Psicología, 2009); thus, informed consent was applied in all cases. We have noted that a large proportion of adolescents (60%) have experienced more than two negative events (Barcelata & Lucio, 2012), supporting previous data from a Metropolitan survey of adolescents (Benjet et al., 2009), which shows that around of 68% of youths in Mexico City had experienced at least adversity or living under conditions of chronic adversity conditions and 17% had experienced some type of adversity linked to psychopathology. In most of our studies, the level of poverty was assessed using several criteria of low SES, for example, household income, and parents' schooling and occupation, as well as the

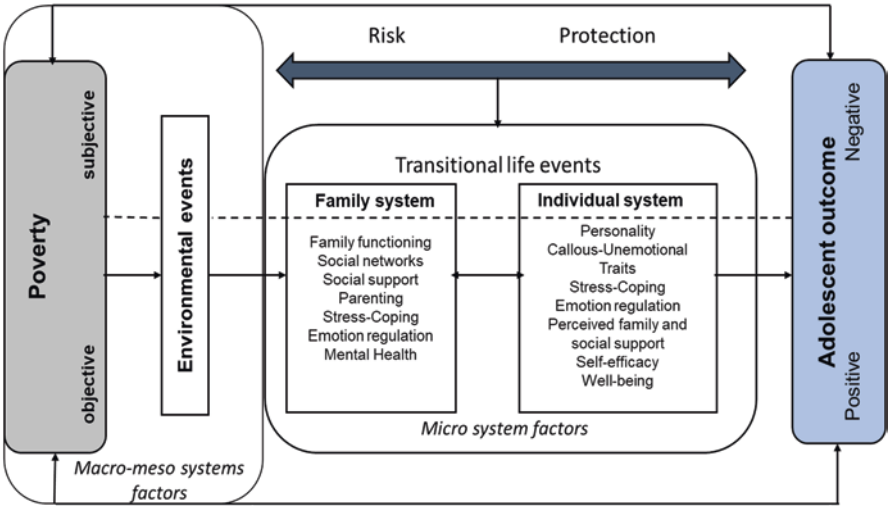


Fig. 7.1 Research schema of personal and family factors involved in adolescent outcomes in a poverty context

adolescents and parents' subjective appraisal of economic hardship such as lack of money to buy basic products, such as food, or to access to leisure, etc. (Conger et al., 2010; Duncan et al., 2015; Wadsworth et al., 2005). Comparative studies to examine negative and positive life events and the interaction effect among sex, age, and clinical versus community samples (sex*age*sample*) from marginalized settings (e.g., Barcelata et al., 2012b) reported that a clinical sample of adolescents presented more adverse life events, with the highest scores in family and personal domains than the community sample did, with the youngest girls scoring higher in negative family life events than boys, whereas community samples presented a lower number of negative life events, but more negative life events in the social domain than expected, in concordance with the findings of others (Evans & De France, 2021; Leventhal & Brooks-Gunn, 2000). These data suggest that stressful life events might be a significative risk leading to psychopathology, in a cumulative process with other adversities related to low SES. Moreover, studies revealed that around 38% of adolescents showed a good level of adaptation according to measures of adaptation or functioning (e.g., Minnesota Multiphasic Personality Inventory-Adolescent; Youth Self Report [YSR]), in mostly healthy domains (Barcelata et al., 2012a, 2017), and good functioning with less internalizing and externalizing of problems and more resources, even in clinical samples (Márquez & Pérez, 2019), which can form the basis of psychotherapy.

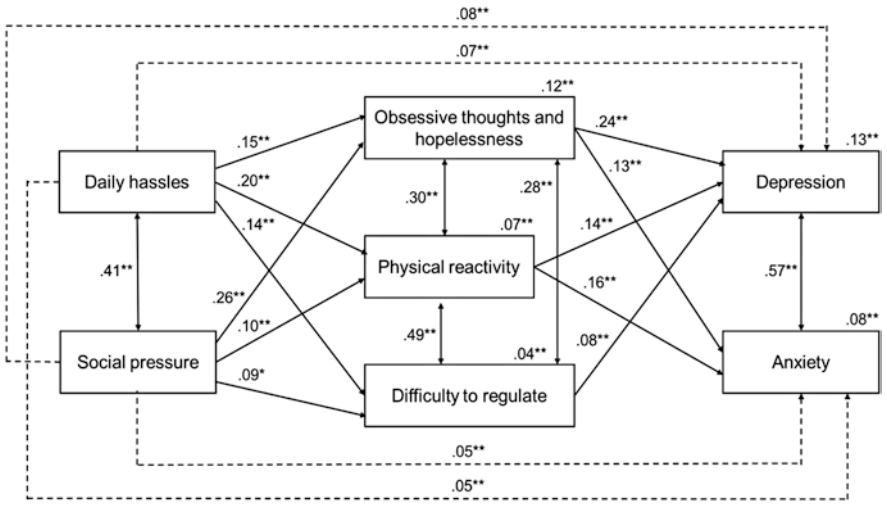
Active coping has been the central protective factor from economic hardship, as well as the best resilience predictor among variables such as social support (Barcelata, 2020; Barcelata et al., 2012a, 2016; Barcelata & Rodríguez, 2017; Rodríguez & Barcelata, 2020). For instance, the contribution of coping, perceived control, self-efficacy, positive thinking, and social support as predictors of mental health outcomes of adolescents were tested using correlational and hierarchical regression analyses (Barcelata & Rodríguez, 2017). Data from high school students from the marginal metropolitan zone of Mexico City ($N = 913$; $M_{age} = 14.91$; ±1.47) revealed that perceived control and family support predicted internalizing behaviors, explaining 37% of variance, and externalizing behaviors with 28% of variance explained. Conversely, positive features (e.g., prosocial behavior and positive self-concept), were positively predicted by positive thinking, perceived social support, and self-efficacy, explaining 23% of variance. However, a few of both internalizing and externalizing broadband of YSR were predictors, depending on each specific behavior (e.g., somatic complaints/rule breaking); moreover, perceived control was the best predictor of both negative and positive outcomes. A subsequent study (Rodríguez et al., 2020) tested the predictive role of personality and emotion regulation on adolescents' coping strategies ($N = 848$; $M_{age} = 15.02$; ±1.60). Unexpected, personality traits such as consciousness and agreeableness showed a greater contribution ($R^2 = 0.324$; $F = 80.765$; $p < 0.001$) than emotion regulation strategies, such as cognitive change, recognition of positive and negative emotions ($R^2 = 0.197$; $F = 41.320$; $p < 0.001$).

Given the controversies of whether emotion regulation leads to coping, or coping precedes emotion regulation, even more, emotion regulation is part of coping process (e.g., Compas et al., 2014; Gross, 2015). Recently, a cross-sectional study with

sub-urban high-school adolescents (Rodríguez et al., 2021) was conducted ($N = 523$; $M_{age} = 13.67$; ±0.786) and several mediation models were tested using multivariate and factorial analyses (e.g., Sobel's test; structural equations modeling [SEM]). Significant direct and indirect effects were observed in models, with the highest explained variance (F (2–520) = 58.32, $p < 0.001$) smaller than the total effect, explaining 18% of variance. Difficulty with emotion regulation was an indirect effect mediating the role of social pressure and hopelessness (estimate = 0.066; Sobel test = 4.16, 95% CI [0.02, 0.07]; $p < 0.001$) with a low total effect of social pressure on obsessive thoughts and hopelessness ($\beta = 0.260$; $p < 0.001$).

Likewise, the role of coping and emotion regulation strategies was tested in a sample of a marginalized area of Mexico City ($N = 770$; $M_{age} = 15.03$; ±1.59). Several models of stressful events and internalizing and externalizing outcomes were computed through SEM. The model presented is an example of one of them (Fig. 7.2). Good model fit indices were obtained ($X^2 = 11.523$ [$p = 0.42$; df = 5]; GFI = 0.996; CFI = 0.994; RMSEA = 0.04 [0.007–0.07]). Significant direct effects ($p < 0.01$) were observed of social pressure on obsessive thoughts and hopelessness daily stressors on physical reactivity, obsessive thoughts and hopelessness on depression, and physiological responses on anxiety. We observed significant indirect effects ($p < 0.01$) of the daily stressors on depression but little significative effect on anxiety (unpublished data).

Data from all models provides a better picture of stress responses in marginalized youth; however, surprisingly, the low contribution of perceived stress was observed in all models. Based on the stress inoculation model of resilience, these data suggest that adolescents living in adverse contexts might be frequently exposed



Note. N= 770 (*p<.05; **p<.001)

Fig. 7.2 Stressful events structural equation model that predicts anxiety and depression, with coping and emotion regulation as mediator variables

to daily stressors and might be likely to have greater tolerance of stress than adolescents from other communities or neighborhoods (Felton et al., 2017; Malhi et al., 2019). Note that most of these studies were aimed at testing some of the adaptation and resilience models in community samples of disadvantaged backgrounds; the protective, medium, or moderating role of coping was consistent with previous data with this population (Barcelata, 2020; Barcelata et al., 2016; Barcelata & Rodríguez, 2017; Rodríguez et al., 2020, 2021). Nevertheless, more studies are needed concerning the relationship between personality, coping, and emotion regulation. Despite these studies explaining a moderate percentage of variance, the findings can be used to design selective versus indicated interventions.

From the positive youth development (PYD) approach (Lerner, 2018), we conducted some studies. For instance, to test the predictive role of psychological well-being in life satisfaction, we carried out a study with 572 Mexican early and middle adolescents aged between 13 and 18 years (Barcelata & Rivas, 2016). Correlational and regression analyses show significant relationships between psychological well-being and life satisfaction, with self-acceptance and self-control as predictors of life satisfaction in both early and middle adolescents. Besides, Rivas et al. (2017), studied the relationship between coping and subjective well-being in a suburban school sample (N = 559; M_{age} = 15.3 years). Multivariate analyses indicated significant sex and age main effects on coping and subjective well-being, but no interaction effects were found. Data showed positive relationships between productive coping and vital satisfaction and positive emotions, as well as negative correlations with negative emotions in both frequency, and intensity, showing that adolescents can promote their wellbeing, as PYD theory and empirical evidence show (Lerner, 2018). This approach is a useful frame for seeking resources beyond difficulties.

Concerning family factors related to diverse issues in different samples of adolescents from marginalized settings of Mexico City, we have found that many families in the context of poverty and psychosocial risk are characterized by parental and adolescent stress with a significative relationship with internalizing and externalizing behaviors (Barcelata & Granados, 2018). Likewise, family support was associated with high cohesion and communication and low conflict and good family functioning in a school sample (Barcelata et al., 2013). Conversely, using Olson's Circumplex Model of Family (Olson, 2000), low cohesion and poor communication were related to adolescent pregnancy, with significant differences between pregnant and nonpregnant teenagers (Barcelata et al., 2014). These data suggest that parents of low SES are usually worried and stressed about their own problems; thus, monitoring of their children is low, and may be repeating the same intergenerational communication pattern (Bacchini et al., 2011; Soenens et al., 2019). Regarding parenting, a study with a clinical sample of low SES was conducted (Márquez & Barcelata, 2016); positive parenting (e.g., behavioral control and parental warmth) were linked to fewer internalizing symptoms (anxiety/depression), as previous studies inform (Karreman et al., 2009; Smokowski et al., 2015), whereas the father's rejection and the mother's psychological control were associated with more internalizing and externalizing symptoms (aggressive

behavior), as have been reported (González et al., 2017; Razavi & Razavi, 2014; Schleider & Weisz, 2016). Similar data were observed with school samples, with lower scores than clinical samples in broadbands of YSR. Another study recruited students from a marginal community of a sub-urban zone of Mexico City ($N = 357$; 13–18 years old). Based on a developmental perspective, analyses were conducted by age group of adolescents. Early adolescents (13–15 years old) perceived greater warmth from the mother than the father, whereas middle adolescents (16–18 years old) perceived greater parental control. However, the youngest girls perceived more family conflicts and negative parenting than the boys did (Barcelata & Gutiérrez, 2018). Note that Mexican girls spend more time at home helping with domestic chores than boys did; thus, they are likely to perceive more restrictions and family difficulties whereas boys are not. Moreover, research with other community samples (Rodríguez et al., 2018) reported high correlations of the rejection of parenting practices by both mother and father with both internalizing and externalizing behaviors, corroborating the importance of parenting in the mental health of teenagers. Data demonstrate that adolescence is a wide transitional period with changing processes; thus, perception depends on the specific adolescent sub-stage (Ebbert et al., 2019).

In sum, findings confirm that adaptation and resilience result from the combination of a set of individual and family factors, in concordance with some conceptual definition (Luthar, 2006; Masten & Obradović, 2006; Masten & Tellegen, 2012); however, coping, in most of them, is a personal factor involved in adolescent outcomes, whether as functional or dysfunctional coping, as well as predictor, mediator/moderator of the stressful events. Likewise, family issues such as social support and family interaction are the most significative variables (Evans & De France, 2021; Evans & Kim, 2013; Kim et al., 2016; McDonald et al., 2020; Perzow et al., 2018; Santiago et al., 2012).

In addition, our research with the marginalized population has generated the need to develop culturally suitable measures considering background differences. Considering that resilience is a process and outcome in a risky or adverse situation, we developed the Resilience Potential Resources Scale for Adolescents (Barcelata & Rodríguez, 2016), aimed at assessing potential resources on resilience in adolescents aged between 13 and 18 years old. A Principal Component Analysis (PCA) was conducted, and eight factors were observed (variance = 42.15%), Positive thinking, Active coping, Avoidance coping, Family support, Social support, Internal control, Spirituality, and External Control, which were confirmed by a Confirmatory Factor Analysis (CFA), using a maximum likelihood method (MLM), showing good fit indexes and Cronbach's alphas (0.642 to 0.746). Recently we also built diverse scales and questionnaires to assess stressful events, for both adolescents and parents. For example, the Perceived Stressful Events Global Scale for Adolescents (Barcelata et al., 2020) was developed with a normative sample ($N = 991$) from different regions of Mexico. A PCA (Promax rotation method) was performed, which revealed six factors: Critical events; Daily hassles; Social exhibition; Family concerns; Academic stressors; and Social pressure. A CFA with MLM, were computed corroborating the six-factor structure. The Parent Perceived Stressors Scale

(Barcelata et al., in press) was developed following similar statistical procedures to the adolescent scale. The Multidimensional Scale of Emotion Regulation for Adolescents (Rodríguez & Barcelata, 2020) was mainly developed based on Gross' model (Gross, 2015). FACTOR (Lorenzo-Seva & Ferrando, 2013) was used and factor analysis yielded eight factors: Recognition of positive emotions, Expression of positive emotions, Emotional control, Suppression, Cognitive change, Physical reactions, Recognition of negative emotions, and Difficulty to regulate. A CFA using the Robust Unweighted Least Squares, corroborated the structure of eight factors and showed acceptable fit indexes.

Finally, according to the global aim of our research project, in the context of the COVID-19 pandemic, we constructed the COVID-19 Youth Perception Survey, for youths from 13 to 24 years of age, in order to explore the contextual and demographic conditions associated with COVID-19, as well as the psychological responses of adolescents in eight domains: Fear and worries, Stress indicators, School pressures, Preventive behaviors, Routine changes, Family functioning, Relaxation and leisure, and Virtual socialization (Explained variance = 59.07%). Risk factors associated with confinement have been identified, such as family difficulties, school pressures, and presence of stress indicators, with girls scoring higher than boys. Resources have also been identified, such as virtual socialization, recreation and relaxation activities, and the use of preventive measures, which have allowed adolescents to adapt positively to the conditions of the current pandemic. Youths from different regions or states of Mexico (e.g., Hidalgo, Querétaro, Michoacán, Mérida, Puebla, State of Mexico, and Mexico City) have participated, and some results have not yet been published (e.g., Barcelata & Jiménez, in press; Barcelata et al., 2021).

Summarizing, most of the studies have been carried out with similar cross-sectional designs and statistical methods. Multivariate methods (e.g., multiple analysis of variance, regression analyses, discriminant analyses) have been useful, for example, to identify the contribution of risk and protective factors in predicting psychopathology, adaptation, and resilience. Likewise, some factorial analyses with SEM have been conducted, trying to go beyond the regression analyses to answer questions aimed at understanding the underlying mechanisms, as recommended (Cicchetti, 2013; Lerner et al., 2013; Masten, 2018). SEM is especially useful in overcoming some limitations of cross-sectional studies as conducting longitudinal research with adolescents and families of marginalized settings is unlikely for diverse reasons (e.g., family moves, migration, changes of authorities of schools and health institutions, low financial support to conduct research for many years). In spite of these limitations, a few universal and selective school-based interventions have been designed focusing on disadvantaged adolescents and parents and aimed at supporting them in thriving in adverse situations and promoting positive adjustment (Barcelata & Flores, 2019; Barcelata & Hernández, 2015; Barcelata & Montalvo, in press).

Final Considerations and Future Perspective

The ecological-systemic perspective of child and adolescent development represents a macro-paradigm integrated for multiple models and theories, and is particularly useful for analyzing adolescents and families in risky, stressful, or adverse situations. Growing international evidence from this perspective shows the relevance of proximal factors such as family, as well as distal factors such as poverty and marginalization, which can represent a risk for adolescent developmental outcomes, depending on a dynamic interaction between adolescents and ecological systems. This model has been a framework of diverse research in Latin America, as a high proportion of children, adolescents, and families live under risky conditions.

The family may be a stable group for growing up during adolescence, but the adolescent developmental trajectories and outcomes do not depend only on this proximal context; thus, it is important to make some critical considerations, because adaptive mechanisms are not always the same, changing across contexts and cultures (Ungar, 2021; Walsh, 2021). Family systemic theories propose that functional families are those with high levels of cohesion and flexibility, open communication, good parenting practices, and skills to cope with the internal and external stressors (McGoldrick et al., 2016; Walsh, 2016). However, daily social and economic pressures can be a substantial source of parental stress leading to other emotional and behavioral problems in parents, affecting their children and adolescents in a negative way in a cascading process as has been noted (e.g., Burt et al., 2008; Masten & Cicchetti, 2010; Rutter, 2012). Further, interdisciplinary investigation has identified the negative potential of adverse experiences linked to poverty on the biopsychosocial development of adolescents; however, the plasticity in adolescence might contribute to changing developmental trajectories (Buckley et al., 2019; Cicchetti, 2013). Thus, more studies of adolescent development in normative as well as non-normative conditions is needed, particularly with the Latin American population, because around 50% live in extreme, rural, or urban poverty, with a significant increase in the latter in recent years.

Many processes of adaptation and resilience can be understood from the compensation risk-protective model of resilience (Masten, 2015), as shown in some of the studies presented in this chapter. In other cases, the challenge resilience model can be useful for explaining how Latin American adolescents can resist many adversities, responding with less intensity to stressful events, as has been noted (Rodríguez et al., 2021; Rutter, 2013). Given that moderate exposure to stress or to low-adversity experiences may increase tolerance to stress and resistance to adverse situations (Felton et al., 2017), some preventive interventions could be designed. On contrary, the model of a cumulative cascade of risk (Burt et al., 2008; Evans & De France, 2021; Rutter, 2012) seems to be more suitable for understanding persistent issues linked to negative outcomes, such as alcohol consumption, maltreatment, neglect, and family abuse, problems of high prevalence among Latin American adolescents and families, as also observed in the Mexican population (e.g., Rivera et al., 2013;

Rodríguez et al., 2007). In these risky groups an adolescent–family integrative and selective intervention is imperative.

The overview of some of the studies on Latin American adolescents and families living in adverse contexts show that some of them have focused on adaptive processes related to diverse risk levels, analyzing the relationship between stress, risk, adverse life events, and resilience in different directions:

1. Toward the study of major stressful life events, severe stressors, or trauma in individuals and families (e.g., Acevedo & Hernandez-Wolfe, 2020; Cardozo-Rusinque et al., 2013; Rueda et al., 2010).
2. Focusing on individual and family stress-coping processes in multiple adverse situations, examining the relationship among minor life events, chronic and daily stressors (Arenas-Landgrave et al., 2019; Barcelata et al., 2012a, b, 2014; Barcelata & Rodríguez, 2017; Estévez et al., 2012).
3. Addressing family functioning, parenting, or rearing, focusing on communication processes, cohesion, and flexibility (e.g., Barcelata & Gutiérrez, 2018; Rivera et al., 2013).

Hence, in Latin America, family is the most important proximal system, either functioning as a risk factor or as a protective factor, as family is associated with mental health problems, but also, with positive outcomes as the research noted. On the other hand, adolescence represents a life cycle period of resources and plasticity. Therefore, many Latin American children and adolescents are resilient; they have a more functional family environment, have greater supervision from their parents, and perceive greater parental support and positive parenting. Despite contextual conditions for families, development of children and adolescents is similar in Latin America; paradoxically, the cultural diversity across countries makes the region one of the most unequal in terms of development indices and quality of life for adolescents and families, even within each country. Research from a multicultural and multilevel perspective is crucial to understand the variability of adaptation processes and resilience in Latin America. In Mexico, for example, there are diverse micro-contexts across the country that represent multiple cosmovisions. Many ethnic groups have their own belief system, and discrimination means that they are ignored, generating a gap among development indices of the rural, suburban, and urban populations. Socio-cultural assumptions and beliefs about parenting, success, good functioning, "doing well" change across regions. Thus, given the multiple cultural contexts and the co-variation of specific psychological processes and different settings, the designing of research and selective interventions are needed.

Evaluation and intervention from a preventive empirical basis perspective should carry on in different settings. Nevertheless, every region of Latin America should be considered according to the diversity of families and the challenges they have to face. We need to propose mental health actions to make families, children, and adolescents resilient, keeping in mind the different microsystems in which they live. Measures should be used as a screen in the early detection of developmental difficulties, for example, identifying callous-unemotional traits in the early stages, as

adolescents are increasingly involved in delinquent activities. New and more school-based evidence programs are needed, designed from a preventive and integrative perspective intervention, with children, adolescents, families, and educators, given the lack of mental health public services (e.g., around 9% of children and adolescents receive mental health services (WHO, 2020)). Research should be the basis for planning public health action, for instance, healthy school programs, aimed at reducing risky youth behaviors from a preventive perspective, as have been conducted in Colombia supported by the Ministry of Education (e.g., Mantilla et al., 2021). Nevertheless, risk groups with multiple sources of stress and significant levels of behavioral and emotional problems should be considered a priority group for selective mental health actions.

Latin American researchers have many challenges in proposing their own theoretical and empirical models, as well as suitable measures, adapting and reviewing those have been shown to be useful across cultures and developing new instruments. Studies have been carried out across multiple settings, with different specific theoretical and methodological models according to populations, groups, contexts, and resources; however, it is important to integrate experiences and findings in other countries. Neurosciences have been growing, broadening our perspective on adolescent development; thus, more integrative and multidisciplinary research is needed to understand the complexity of developmental pathways and outcomes in Latin American youth and families, most of them living under pressurized socioeconomic conditions. Longitudinal studies are also needed because the effects of early experiences are not always evident in cross-sectional studies.

In synthesis, the developmental systems perspective implies broad theoretical and methodological framework research with practical implications that are particularly relevant in the Latin American context owing to the variability of macro-cultural factors across the countries and micro-cultural contexts, even within a country. It is important to adopt more positive adolescent development models (e.g., competence model, or the PYD theory), suitable for the Latin American context, to improve social, emotional, and cognitive competences in adolescents and families, focusing more on their resources or abilities than their difficulties, to face challenges in a changing world.

In Latin American culture, the family plays a central role; however, recurrent economic and political crises have turned it into a proximal risk factor for adolescent development. Nevertheless, the family can also be a mediating and moderating factor that buffers and protects adolescents from adverse situations implicit in environments of marginalization and poverty, contributing to successful adolescent adaptation; thus, a more inclusive intervention should focus on improving family competencies. Therefore, enhanced multidisciplinary, integrative, and multilevel research is needed based on diverse methodological approaches, with stronger designs and more robust statistical analyses, overcoming some of the limitations of cross-sectional studies. Research should be the basis of designing multilevel intervention from a preventive perspective in diverse settings. So many investigation challenges, as well as opportunities, are awaiting Latin American researchers.

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Chapter 8
Understanding Social Risk Factors in Chilean Adolescent Suicides: An Analysis of Mediating Mechanisms

Yanet Quijada

Introduction

Chile is one of five countries in the Organization for Economic Cooperation and Development in which the rate of child and adolescent suicide increased considerably between 1995 and 2009, with an estimated 54% increase (OECD, 2015). The suicide rate in adolescents between 15 to 19 years of age ranged from 8.6 to 8.1 per 100,000 inhabitants between 2010 and 2015, and there is a clear disparity dependent on gender, region, and level of urbanity (Araya, 2019). Chile has double the rate of adolescent suicidal mortality compared with Latin America and the Caribbean (Silva et al., 2013). Although in the last few years, this rate seems to have lowered, suicide remains the principal cause of death in adolescents between the ages of 15 and 19 years (Araya, 2019). Taking into consideration these rates, it is evident that child and adolescent suicide is a great public health issue in Chile.

Given the difficulties faced in researching consummated suicide, a significant part of investigations into this topic has focused on suicidal ideation and intent – not only because of its role in the early prevention of suicide (Franklin et al., 2017) but also because of its relationship to the well-being and mental health in this population (Glenn et al., 2015). Suicidal ideation is an exceptionally important predictor of suicidal intent (Turecki & Brent, 2016), the latter being the principal predictor of consummated suicide in the general population (Bostwick et al., 2016). In Chile, the prevalence of suicidal ideation in adolescent students is reported to be 24% (Silva et al., 2017), indicating the magnitude of this problem

Y. Quijada (✉)
Facultad de Psicología, Universidad San Sebastián, Concepción, Chile
e-mail: yanet.quijada@uss.cl

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and the need to advance understanding of the extreme psychological distress experienced by this population.

Likewise, many studies in Chile have identified a series of risk factors for suicidal behavior, including being female, depression, low self-esteem, dysfunctional family relationships, lack of social support, rurality, drug use, and hopelessness (Barroilhet et al., 2012; Salvo & Melipillán, 2008; Silva et al., 2017; Valdivia et al., 2015). Conflictingly, there have been few systematic analyses of the relationships between risk factors and adolescent suicidal behavior in Chile. It is also striking that Chile's historical conditions of social inequality have not been sufficiently considered in our understanding of suicide. Similarly, Chile's education system, an example of social segregation and gender inequality (Hernández & Raczynski, 2015; Madero, 2011), has not been sufficiently considered when understanding and explaining adolescent suicidal behavior.

Taking into account this information, in this chapter we hope to contribute to the understanding of how social contexts influence the mental health of Chilean adolescents, and what mediating mechanisms explain the relationship between a determined social context and suicidal behavior. In order to facilitate this analysis, we present a series of findings that shed light on the relationship between suicidal context, behavior, and its possible mediators, organized in sociodemographic, educational, psychosocial, and clinical variables. Finally, by way of integration, we present and discuss the results of a study on a population of Chilean adolescents that presents risk trajectories, from suicidal context to suicidal behavior, by identifying intermediate mediators.

Conceptual Framework and Relevant Risk Factors for Latin America and Chile

Sociodemographic and Educational Factors Associated with Suicide

Rates of suicidal behavior vary between urban and rural regions. In general, higher suicide rates have been reported in adolescents who live in rural areas (Fontanella et al., 2015). In Chile, rates of adolescent suicide vary according to different regional districts, with higher rates found in: rural areas, in areas with higher rates of poverty, and in areas that are mainly inhabited by indigenous groups (DEIS, 2017). In areas with a large demographic of indigenous people, rates of suicide among indigenous adolescents are higher than the regional average and higher than the average found in the population of non-indigenous adolescents in the same region (CEPAL, 2010). Among the various explanations provided for this disparity are: the lack of development projects for rural youth (Valdivia et al., 2015), inaccessible specialty health services, low self-esteem, and low socioeconomic status (Fontanella et al., 2015).

When explaining the relationship between high adolescent suicide rates and ethnicity, experts allude to Chile's history of discrimination and the poverty experienced by Chile's indigenous people (CEPAL, 2010). When studying this from an epidemiological perspective, there is a clear lack of investigation of the intermediate mechanisms that create the relationship between urbanity and suicide. In addition, there is an excessive focus on suicide, rather than on suicidal behaviors such as ideation, in these studies, which significantly reduces the potential for useful evidence in the design of early prevention programs (Handley et al., 2011). Likewise, studies that utilize databases with macroeconomic indicators of poverty, inequality, and their relationship with suicide intensify the need to study the psychological mechanisms that mediate between social context and personal distress—as those are the fundamental social comparison processes that, once understood, will allow for greater comprehension of the problem (Hounkpatin et al., 2016).

In the past few years, there have been studies that suggest that Chile's education system creates environments of social segregation, which is a representative example of the country's social inequality (Hernández & Raczynski, 2015). Furthermore, the education system has also contributed to the perpetuation of gender inequality, resulting in the detriment of education and well-being of young girls and female adolescents (Madero, 2011). Chile's current education system groups are as follows: low-income families in public schools, middle-class families in subsidized private schools, and upper-class families in unsubsidized private schools. There is consensus that one's quality of education is directly related to family income, with students attending public schools receiving the worst quality education (Hernández & Raczynski, 2015). Beginning in 2006, students attending secondary schools (14–18 years old) started a social movement that demands free and quality education, which is still active today (Varas et al., 2020).

Young people in Chile between 15 and 19 years of age have reported that the environment in which they experience the most discrimination is in school, with their social class the main cause of discrimination (INJUV, 2015). In addition, students attending public schools report a higher level of social exclusion than students attending private schools (Valdivieso et al., 2005). With regard to suicidal ideation, studies have detected an upward trend according to the type of school attended, with a lower prevalence of ideation in unsubsidized private schools, and a higher prevalence in public and subsidized private schools (Florenzano et al., 2010; Ventura-Juncá et al., 2010). These figures are in line with international studies that indicate that students attending low-resourced schools are at a higher risk of suicide, as well as of low school performance, dropout, and failure (Daniel et al., 2006).

The studies reviewed in this section debated the relationship between social exclusion and inequality, and mental health problems (WHO, 2004), including suicide, (Duarte, 2007; Wetherall et al., 2015), and conclusively point out the need to identify the intermediate processes at play in this relationship.

Psychosocial and Clinical Factors Associated with Suicide and Its Relevance in a Chilean/Latin American Context

Social Defeat

The concept of social defeat is defined by the sensation of failing in a struggle to gain valuable social status or achieve important personal goals (Gilbert & Allan, 1998). The concept of social defeat is based on evolutionary social comparison, but also adds an individual component by proposing that humans develop their own psychological hierarchy of goals. Social defeat as an evolutionary psychological mechanism has been proposed as a valid explanatory framework for understanding depression and suicide, with great empirical support when studied in populations with suicidal intent and adolescents (Li et al., 2020; O'Connor et al., 2013).

The transition from social defeat to suicide has been integrated into recent suicide models such as the *Integrated motivational-volitional model of suicidal behavior* (IMV, O'Connor, 2011). Social defeat in nonpathological conditions is associated with momentary reactions linked to maintaining cognitive strategies of personal ineffectiveness, behavioral strategies of hypervigilance or behavioral inhibition, and affective strategies of positive affect reduction (Taylor et al., 2011). The pathological condition of social defeat is experienced as a sensation of being trapped by defeat, which can therefore maintain the aforementioned strategies, and which would have biological correlations with low serotonin levels and high cortisol levels—both related to symptoms of depression (Wood et al., 2012). Within this framework, suicide is conceptualized as an attempt to escape the aversive mental state of being trapped in social defeat.

It has been proposed that, under conditions of low socio-economic status without possibility of social mobility, people suffer the consequences of social defeat, which increases understanding of the relationship between adverse social context and depression (Wood et al., 2012). In addition, adolescence can be a period in which individuals are especially vulnerable to the effects of social defeat given the experiences encountered during it, such as: identification with reference groups, definition of future goals and, owing to development progress toward more abstract thinking, the integration of macrosocial aspects into their understanding of society (Quijada et al., 2019). Consequently, high rates of suicidal behavior in Chilean secondary school students might be understood as a reaction to the experience of social defeat, given Chilean adolescents' experiences of social discontent and mobility.

Depressive and Psychotic Symptoms and Consumption of Alcohol, and Their Relationship with Adolescent Suicidal Behavior

Along with suicidal ideation and intention, depressive disorders, schizophrenia, and alcohol abuse are considered to be risk factors for suicidal behavior (WHO, 2014). Nevertheless, a great number of adolescents may use alcohol and other substances,

and experience depressive and even psychotic symptoms—without necessarily configuring a disorder as such –and still find themselves at risk of suicide.

In many populations, it has been established that depressive symptoms and hopelessness are of great importance when predicting suicidal behaviors (Ribeiro et al., 2018). Many factors have been identified as predictors of suicidal behaviors in adolescent students in Chile, as well as in international contexts (Silva et al., 2017; Li et al., 2016). In students who attend secondary school in the Chilean capital, it has been found that, as suicidality increases, so do the frequency and severity of depressive symptoms. In fact, it is estimated that an adolescent with some degree of suicidality carries a 10 to 30 times greater risk of experiencing severe depressive symptoms (Barroilhet et al., 2012).

Specifically in terms of suicidal ideation, depressive symptoms show a major predictive capacity compared with other common factors such as stress or academic performance (Jeong et al., 2020). It has also been observed that adolescents that experience specific depressive symptoms have a similar risk profile to those who are formally diagnosed with depression (Nrugham et al., 2008).

With regard to psychotic symptoms, longitudinal studies have found that psychotic-like experiences (PLEs) increase the risk of suicidal ideation and other adolescent suicidal behaviors, beyond the effect of current psychopathology (Yates et al., 2019). The study by Núñez et al. (2015) found an association between psychotic symptoms and suicidal behaviors (ideation and intent), as well as between depressive symptoms and suicidal behaviors, in a group of Chilean adolescent students. Despite growing evidence for the effect of PLEs on adolescent suicidal behaviors; its interaction with clinical factors, such as depression; and its interaction with contextual factors, such as urbanity, ethnicity, and low economic status—the variable has been studied minimally at the national level.

The consumption by adolescents of alcohol, marijuana, and other substances has also been identified as a risk factor for suicidal behaviors. In secondary school students, drug use and alcohol consumption at an early age increase the probability of suicidal ideation (Borges et al., 2017). In adolescents who have a history of suicidal behaviors, drug use and alcohol consumption increase the risk of a second attempt (Haquin et al., 2004; Oesterle et al., 2015). Analyses of ethnic minorities and of low- and middle-income countries confirm evidence for this relationship (Carvalho et al., 2019). In Chile, the association between alcohol consumption and greater risk of suicidal ideation is found in secondary school students in various regions of the country (Florenzano et al., 2010; Salvo & Castro, 2013). Marijuana use and its relationship with suicidal behaviors have been less frequently explored in the country than alcohol use in this context. A study carried out with adolescent students from socioeconomically deprived regions of Chile reveals an association between the use of marijuana and suicidal ideation/self-harm, with girls at a greater risk (Spears et al., 2014).

These studies take on greater relevance when taking into consideration that half of Chile's secondary school students (57.3%) report consuming alcohol in the last year, whereas one-third (30.9%) report use of marijuana (Senda, 2018). These figures are among the highest in South America, and align with a new consumption

pattern in America that signals a shift of use at younger ages, with equal consumption rates in boys and girls (OEA, 2019). This signifies the relevance of including drug-use prevention in the development of adolescent suicide prevention policies.

Family as a Protective Factor in Contexts of Low Social Status

Social support has been studied as a protective factor for suicidal behavior; three relevant sources of social support have been identified in adolescence, as follows: family, school environment, and peers. When studying these sources of social support in relation to adolescent suicidal intent, low family support is the only factor that was independently associated with a history of suicide attempts (Miller et al., 2015). Similarly, low family support is a better predictor of suicidal ideation than low peer support, as well as in adolescents victimized by peers (Bonanno & Hymel, 2010). In adolescents belonging to a low social status, it has been found that trusting their own parents is a protective factor for recurrent depressive symptoms (Damsgaard et al., 2014). In Chile, it is reported that, in vulnerable adolescents, parental support moderates the effect of low self-esteem on the individual's resilience (Leiva et al., 2013). It has also been reported that healthy family functioning is related to lower suicidal ideation and intent, and acts as a protective factor for suicidal behaviors, as well as for depressive symptoms and hopelessness (Florenzano et al., 2010; Silva et al., 2017; Valdivia et al., 2015). With regard to the many dimensions of family functioning, it has been reported that, in students with low socioeconomic status, low family adaptability is associated with higher suicidal ideation and intent—again highlighting the importance of chaotic power dynamics, control, and discipline in students who belong to families with low adaptability (Pavez et al., 2009). However, in adolescent samples from different social statuses, family cohesion, rather than family adaptability, acted as a protective factor for suicidal intent (Silva et al., 2017).

In general, healthy family functioning is a predictor of adolescents' satisfaction with life (Proctor et al., 2009) and a protective factor for suicidal intent in families that live in rural parts of Chile (Valdivia et al., 2015). From the framework of social defeat, healthy family functioning could help to establish alternative paths to psychopathological paths—ones that are associated with well-being (O'Connor, 2011).

Exploring Risk Pathways: A Study of the Mediating Mechanisms Between Contextual Factors and Suicidal Ideation in Chilean Adolescents

Between 2018 and 2019, a study aimed at developing an explanatory model of the suicidal behaviors of adolescents that accounted for the role of relevant contextual, psychosocial, and clinical variables was conducted with Chilean secondary school students (Quijada, 2019).

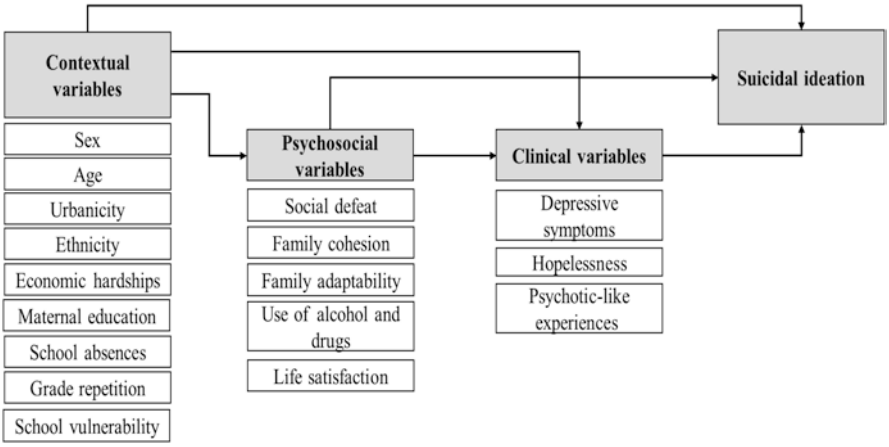

Fig. 8.1 Simplified model of mediation between context and suicidal ideation for Chilean adolescent students

The selected contextual factors group the sociodemographic variables that were found to be relevant to the suicidal behavior discussed above, as well as socioeducational data that reflect the social context of the students. This includes personal factors, such as receiving a scholarship owing to economic difficulties, and school variables, such as educational vulnerabilities as defined by the School Vulnerability Index (SVI, or in *Spanish, IVE*[1]). Fig. 8.1 (Quijada, 2019), demonstrates the theoretical proposed, simplified model that identifies selected factors. This figure presents the mediations that this study sought to determine, as follows:

1. The mediating effect of each psychosocial variable in each context variable, and suicidal ideation.
2. The mediating effect of each clinical variable in each context variable, and suicidal ideation.
3. The mediating effect of each psychosocial and clinical (together) variable in each context variable, and suicidal ideation.

It should be noted that, in contrast to other mediation models, the effect of sociodemographics was not controlled for, and were, rather, considered in the complete analysis. In this manner, we can understand how one factor—such as social defeat—behaves in the complex context of all the other variables. As a result, if any of these factors are removed from our model, the identified pathways may change in response to the change in the context of the interaction.

[1]The IVE measures the percentage of vulnerable students in an educational establishment, and creates values between 0 and 100, where higher values reflect greater vulnerability. The index reflects the level of poverty and risk of school failure in an educational establishment. It is evaluated by the Ministry of Education via a direct census of all the families in a school, and the information is cross checked with other institutions (health, child protection system, and civil registry).

When selecting study participants, various social contexts were sought out specifically—allowing for the diversity of economic demographics, social capital, and regional location. The study took place in the second most populated region in the country, which—unlike the capital—represents the rural population, as well as the indigenous population. The study also included secondary school students from three different types of schools identified by state subsidies: public schools (46%), subsidized private schools (45%), and unsubsidized private schools (10%). In total, 20 schools distributed in 11 districts participated, of which 5 corresponded to semi-rural or rural areas. The final sample corresponded to 1376 students, with an average age of 15.35 years (SD = 1.1; 13–21 years), of which 50.8% were male.

Understanding the Complex Risk Pathways of Suicidal Ideation Identified in Chilean Adolescents

The model presented in Fig. 8.2 demonstrates all the mediation pathways that significantly increase the risk of suicidal ideation, taking into consideration the effect of all the model's variables. An analysis of the results reveals that alcohol consumption and drug use have two types of effects on suicidal ideation: one direct and one indirect via PLEs and depressive symptoms. All the mediation pathways significantly increase the risk of suicidal ideation, taking into consideration the effect of all the model's variables.

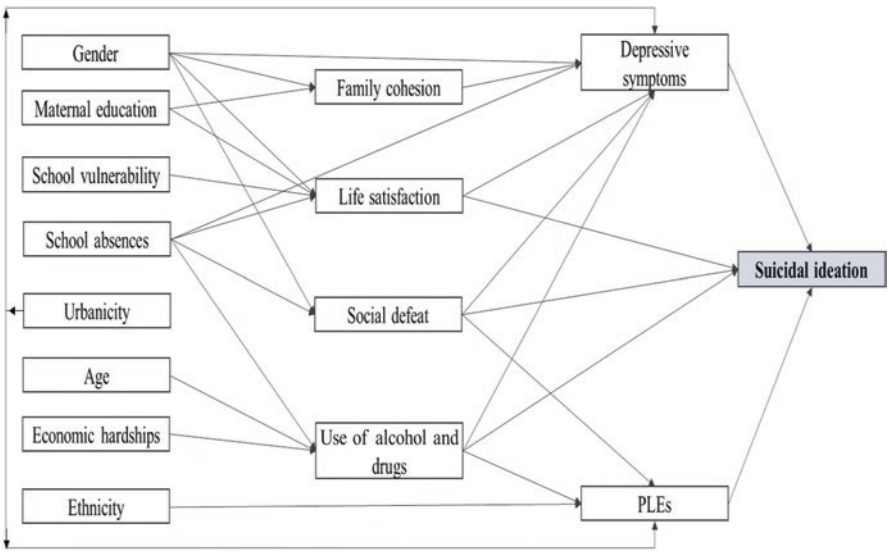

Fig. 8.2 Significant mediations between context variables and suicidal ideation. PLEs psychotic-like experiences

Their effect is determined by three distinct context variables: economic difficulties, late adolescence (age), and truancy. The scientific literature provides a separate account of these associations, and in this study, they all emerged jointly. In this regard, school socioeconomic disadvantages predict both illicit drug use and depressive symptoms (Huang et al., 2020). Likewise, the simultaneous consumption of alcohol and use of marijuana is related to greater truancy (Patrick et al., 2018), as well as to a lower perception of educational support (Shekhtmeyster et al., 2011), both of which could facilitate school absence. With regard to clinical variables, marijuana use predicts both psychotic and depressive symptoms in late adolescence (Leadbeater et al., 2019). It is evident that all these variables can be prevented and supported by appropriate school policies. Table 8.1 summarizes regression coefficients of specific significant indirect mediation effects of the psychosocial and clinical variables in the relationship between demographic variables and suicidal ideation.

In the case of social defeat, a similar pattern emerges; social defeat has a direct effect on suicidal ideation, and an indirect effect via PLEs and depressive symptoms. Its effect is determined specifically by two contextual variables: being female and school absence. In general, studies that take into account social defeat do not report on gender differences—and rather, control for the variable—although there is evidence for a high correlation between social defeat and depression in girls(Troop & Baker, 2008). The sensation of social defeat can originate from experiences of humiliation and failure to achieve certain goals. In the case of adolescents who grow up in traditional, patriarchal contexts, it can be exacerbated and transformed into psychological distress, expressed by depressive symptoms and suicidal ideation—both variables related to social defeat (Taylor et al., 2011). Similarly, there is a greater prevalence of PLEs reported in girls; however, the psychological processes that explain the difference are not yet sufficiently understood (Riecher-Rössler et al., 2018). A possible explanation can be found in the higher prevalence of adverse experiences, such as emotional and sexual abuse, reported by women with psychotic disorders, compared with men (Pruessner et al., 2019); these experiences, as well as others related to social defeat such as discrimination, social undermining, and low economic status, have been related to a greater prevalence of psychotic symptoms (Jaya & Lincoln, 2016).

In the same line of mediation, the effect of school absence on social defeat and clinical symptoms can be related to low perception of general social support (both familiar and educational), identified as a mediating variable in suicide risk pathways in the IVM model (O'Connor, 2011). Furthermore, adolescents involved in truancy perceive less affection from their families, have poor relationships with their classmates and professors, and present a higher level of depressive symptoms (Kim, 2020). It is important to note that there is a gender disparity in rates of truancy in Chile, with a higher frequency of girls between the ages of 15 and 19 abandoning their studies than among their male counterparts—the major reason being dedicating themselves to domestic labor, caring for a relative, or birthing a child (INJUV, 2015).

Table 8.1 Significant effects of indirect mediation of the psychosocial and clinical variables in the relationship between demographic characteristics and suicidal ideation (adapted from Quijada, 2019)

Demographic variables	Psychosocial variables	Clinical variables	Estimator absence	95% confidence intervals	
				Lower	Upper
Economic hardship	Use of alcohol/ drugs		0.00804	0.00101	0.01940
Economic hardship	Use of alcohol/ drugs	PLEs	0.00177	0.00023	0.00390
Economic hardship	Use of alcohol/ drugs	Depressive symptoms	0.00212	0.00035	0.00460
Age	Use of alcohol/ drugs		0.01222	0.00424	0.02240
Age	Use of alcohol/ drugs	PLEs	0.00270	0.00107	0.00480
Age	Use of alcohol/ drugs	Depressive symptoms	0.00321	0.00145	0.00570
School absence	Use of alcohol/ drugs		0.01740	0.00567	0.02960
School absence	Use of alcohol/ drugs	PLEs	0.00384	0.00125	0.00710
School absence	Use of alcohol/ drugs	Depressive symptoms	0.00458	0.00192	0.00800
School absence	Social defeat		0.05942	0.01786	0.10450
School absence	Social defeat	PLEs	0.01056	0.00306	0.02050
School absence	Social defeat	Depressive symptoms	0.01574	0.00463	0.02960
School absence	Life satisfaction		0.00889	0.00041	0.02060
School absence	Life satisfaction	Depressive symptoms	0.00255	0.00047	0.00560
School absence		Depressive symptoms	0.02377	0.01029	0.03970
School vulnerability	Life satisfaction		0.00017	0.00001	0.00040
School vulnerability	Life satisfaction	Depressive symptoms	0.00005	0.00001	0.00010
Female	Social defeat		0.21835	0.16195	0.27320
Female	Social defeat	PLEs	0.03877	0.02375	0.05600
Female	Social defeat	Depressive symptoms	0.05787	0.03432	0.08130
Female	Life satisfaction		0.01955	0.00210	0.03820
Female	Life satisfaction	Depressive symptoms	0.00561	0.00215	0.00970
Female	Family cohesion	Depressive symptoms	0.00395	0.00148	0.00710

(continued)

Table 8.1 (continued)

Demographic variables	Psychosocial variables	Clinical variables	Estimator absence	95% confidence intervals	
				Lower	Upper
Female		Depressive symptoms	0.02941	0.01394	0.04590
Maternal education	Life satisfaction		0.00965	0.00031	0.02260
Maternal education	Life satisfaction	Depressive symptoms	0.00277	0.00069	0.0062
Maternal education	Life satisfaction	Depressive symptoms	0.00282	0.00071	0.0058
Urbanity		PLEs	0.02094	0.00655	0.0384
Urbanity		Depressive symptoms	0.04419	0.02255	0.0677
Ethnicity		PLEs	0.02318	0.00365	0.0453

PLEs psychotic-like experiences
$R^2 = 0.61$

The following risk pathway is related to the previous findings: being female and truancy, and the effect of dissatisfaction with life as a result of the mother's incomplete schooling; and the dissatisfaction as it relates directly to greater suicidal ideation, and indirectly to depressive symptoms. In addition to the relationship between being female and missing class, a mother's incomplete schooling can be associated with certain behaviors, such as caring for others, with higher values for her daughter, compared with other activities such as her studies—ultimately affecting her satisfaction with life. A low educational level in parents has been associated with a lower level of well-being and less satisfaction with life in adolescent populations (Padilla-Moledo et al., 2016). In general, a low level of satisfaction with life at this age is also associated with depressive symptoms (Moksnes et al., 2016) such as suicidal ideation (Fonseca-Pedrero et al., 2018).

Continuing our discussion of mediations, being female and a mother's incomplete schooling present yet another risk factor in suicidal ideation via low family cohesion or depression. This can be understood as an increase in tension in family dynamics owing to the different expectations that may arise between opportunities for adolescents and the role that is expected in homes with parents with low educational attainment. In this regard, there is evidence that depressive symptoms in adolescent females living in patriarchal countries derive from stress at home, as a result of sociocultural expectations surrounding gender role norms, and this relationship is mediated by low family cohesion (Anyan & Hjemdal, 2018).

In the urban context, being female and truancy have an indirect effect on suicidal ideation via depression. Urban opportunities are concentrated in topics such as education, health, and recreation among others, and these opportunities have the potential to aggravate the psychological discomfort of adolescent girls who do not have

access to them, such as education. An urban context also has an indirect effect on suicidal ideation via PLEs and depressive symptoms. It is difficult to interpret this relationship, given the multiple and shifting factors that converge in this context. In general, PLEs and depressive symptoms are more prevalent in urban regions, and this effect may be attributed to psychological factors such as greater social stress and greater environmental stress, for example, pollution or an interaction with variables of biological vulnerability (Lecic-Tosevski, 2019). Likewise, urban contexts and a sense of belonging to an ethnic group had a direct effect on PLEs. The effect of ethnicity, especially a sense of belonging to an ethnic group, is associated with greater PLEs and suicidal behaviors (Schofield et al., 2016).

Conclusions and Future Implications for Latin America

The results discussed bring to light the complexity of bringing various aspects of adolescent life into an analysis of suicide risk, and allow a more contextualized understanding of elements that have been previously omitted in discussions about suicide prevention. Although common suicide risk factors have been identified in many countries and regions of the world, it has also been proposed that there are differences between them—which may explain the higher prevalence of suicidal behaviors in low- and middle-income countries (Uddin et al., 2019). The model presented in this study represents an advancement in the recognition of the differences that arise in Latin America, and contributes to the design of suicide prevention and intervention strategies. Latin America has been recognized as one of the most inequitable in the world—a reality that calls researchers to action to contribute to the social improvement of its people. Incorporating context variables and understanding the mechanisms that associate them with suicidal behavior in the youth of Chile, as well as identifying new languages of suffering beyond hopelessness and depression, are an improvement in this regard. Thus, the sensation of social defeat, which implies fighting for a goal and failing to achieve it, can better represent the psychological discomfort of the youth of Latin America. In this regard, we can hypothesize that the student demand for the right to free and quality education, as well as other social movements, can be understood as an alternative to falling into the woes of social defeat. It is yet to be explored how the involvement of Latin American adolescents in collective movements can act as a protective mechanism against psychological distress and suicidal behaviors.

Risk pathways toward suicidal ideation, which include being female, indicate the necessity of studying risk pathways through the lens of gender. Because many analyses typically control for gender variables, many specific risk factors specific to female distress can be lost, and therefore stall preventative efforts. The gender disparity in Latin America remains relevant in various areas such as education, paid and unpaid work, among others. This represents another source of inequality and, consequently, of psychological discomfort and feelings of defeat. Focusing preventative efforts on adolescent girls seems a natural next step, given the consistent

evidence that indicates higher levels of suicidal ideation and suicidal intent in that population.

It is clear from the above information, that school environments are the appropriate space for various preventative actions, such as closer monitoring of truancy and greater prevention of alcohol consumption and drug use. It is greatly apparent, however, that the conditions of social vulnerability in Chile's education system, and their effect on satisfaction with life and risk of suicidal ideation, speaks to the need to reform the education system into a protective, egalitarian environment that fosters a future vision of hope for its students.

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Chapter 9
Coping Styles in Children and Teenagers in Different Situations of Psychosocial Risk

Norma Ivonne González-Arratia López-Fuentes, Martha Adelina Torres Muñoz, Sergio González Escobar, and Ana Olivia Ruíz Martínez

Introduction

The main objective of this chapter is to analyze which coping styles are most frequently used by children and teenagers and the possible differences regarding gender in diverse psychosocial risk situations in which they live. This analysis is essential, on a theoretical basis, to provide empirical evidence about how people face different problems during childhood and adolescence. As a result, it opens up the possibility of its implementation as it results in the creation of intervention programs for all the different risk situations.

How people try to face a stressful situation has been the reason for multiple studies in psychology, since the approach we decide to take is an essential part to obtain well-being and mental health, especially in the lives of children and teenagers. It has been repeatedly observed that during adolescence, stress is increased owing to physical changes, which may have a cognitive or behavioral impact and a direct effect on the affective states that are the cause of emotional distress (Reyes et al., 2017). These conditions can be complex at this age as individual, family, academic, social, and health crises are faced, which may provoke an emotional imbalance,

N. I. González-Arratia López-Fuentes (✉) · M. A. Torres Muñoz
Facultad de Ciencias de la Conducta, Universidad Autónoma del Estado de México, Toluca, State of Mexico, Mexico
e-mail: nigonzalezarratial@uaemex.mx

S. González Escobar
Centro Universitario Atlacomulco, Universidad Autónoma del Estado de México, Toluca, State of Mexico, Mexico

A. O. Ruíz Martínez
Centro Universitario Zumpango, Universidad Autónoma del Estado de México, Toluca, State of Mexico, Mexico

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adaptation problems, leaving home or educational environment, and thus they become risk factors that make children and teenagers even more vulnerable. However, it has also been reported that the teenage years may not necessarily be a contributor to stress (Valdez, 2018) and that a better interaction between a person and its environment is enabled through resilience (González-Arratia, 2018), acquisition of life skills, overcoming a traumatic experience, and constructive adaptation.

Thus, there is an understanding that coping styles play an essential role as protection or risk factors, depending on their use, as the consequences could be either harmful, such as drug use (Gómez & Matamoros, 2018), academic difficulties (Romero et al., 2017), and suicidal ideation (Rohani & Esmaeili, 2020), or favorable, to enable a better adaptation to the context. In sum, how adverse situations are met affects people's mental health and well-being (Rodríguez et al., 2018).

Although the study of coping styles has been a subject of extensive research, it has been directed essentially toward the study of coping styles in adults in the last few years. Its topics deal with case studies by measuring coping styles, prospective studies about their relationship with several personality variables, and, recently, the consideration of coping styles as possible mediators and moderators of the connection between stressors and pathology. However, the question about which coping styles children and teenagers usually use persists. Therefore, it is necessary to continue investigating those styles to implement abilities that develop resilience and well-being in people, particularly teenagers who live under various conditions of social vulnerability, as stress has several consequences for people's mental health and psychological adjustment. Namely, in our opinion, inconsistent data and scarce research regarding childhood and adolescence need to be studied in psychosocial contexts such as ours to provide new guidelines for future research.

What Is Childhood and Adolescent Stress?

Nowadays, there are constant challenges and high demands in different contexts such as family, academic, and social, leading to stress. In the case of children and teenagers, the study of stress and coping strategies has become relevant because—as discussed for several decades by Fields and Prinz (1997) "the world of adults is different from that of children, particularly because children have less control of circumstances" (p. 938). But this is also current as environmental difficulties could be conditions that imply a continuous challenge for children and teenagers because their adjustment strategies are not the same as those of adults. For this reason, it is necessary to continue analyzing coping strategies that people have at this time of life, especially when they find themselves in the middle of a crisis or hardship, as they also face multiple, day-to-day or traumatic circumstances that require an adjustment.

In coping studies, it is necessary to draw upon the concept of stress. It has a general conceptualization from its various definitions, but its intentions are focused basically on two subjects: physics and psychology. According to the conceptual

framework, it is essential to note that stress can be understood as a response to the environment (Selye, 1956). In contrast, the stressor is the stimulus (Holmes & Rahe, 1967) or even interaction (Lazarus, 1966). Nowadays, the definitions of stress are centered mainly on several aspects such as environment, circumstances, or harmful conditions to a person (González-Arratia et al., 2020). It then conveys that in the study of stress within these age groups, the interaction among these aspects must be considered, which implies an analysis of a child's integration and adjustment capability to the demands of the environment (González-Arratia et al., 2020).

From the body of knowledge on stress definitions, the notion of cognitive perspective is picked up on; it explains that psychological stress conceptualizes a person as active when there is a relationship between them and the environment (Lazarus & De Longis, 1983). This concept is the most frequently used idea of stress as it represents a solid conceptual basis for its understanding. Furthermore, explaining what makes people feel happiness, anger, or sadness is a subjective meaning given to events (Domínguez & Ibarra, 2017).

Several authors note their classification for stress sources; according to Mézerville (2004) and Espinoza et al. (2018), one of them is the response to the following:

1. Pressure. When there is a need to meet a higher level of performance.
2. Frustration. When there is an obstacle that does not allow any goal to be reached.
3. Conflict. When there are two or more clashing demands or opportunities.

On the other hand, reactions resulting from stress may be grouped by:

1. Physiological, which refers to neuroendocrine and autonomic nervous system responses (e.g., dilated pupil, dry mouth).
2. Emotional, which refers to subjective sensations of emotional distress such as anxiety.
3. Cognitive (e.g., worry, negation, and loss of control) (Barradas et al., 2018). Comprehending the previous classification surmises that it is a complex process evaluated in distinct fields and, in psychology, both emotional and cognitive responses are analyzed even more.

Solís and Vidal (2006) and Barradas et al. (2018) suggest that "sources of stress are diverse, and they could be an environmental, social, or internal demand" (p. 34). Hence, it is complicated to catalog or classify said sources of stress; however, to identify those mentioned by Lazarus and Cohen (1977), it is possible to arrange sources of stress into three groups. First, those dealing with significant events (for example, catastrophes are universal phenomena and outside of anybody's control). Second, critical events concerning one person or a few people and may be outside of their control (for example, the death of a loved one). Third, day-to-day concerns, daily comings and goings, or little things that are irritating (for example, traffic).

It is crucial to consider the event's magnitude and the kind of adjustment required as physical, family, social, working, academic situations, among others, are not the same, mainly if these experiences are evaluated as negative or positive. Therefore, individual differences in the face of several stimulus vulnerabilities should be considered, especially when dealing with children and teenagers (Solís & Vidal, 2006).

These days it is believed that stressful events can be considered regular, special, and extraordinary. Regular stressful events refer to those day-to-day situations; special stressors are those that present themselves during specific life periods, for example, the transition between one development stage and another; and extraordinary stressors are generally unpredictable and intense (Araújo et al., 2015; Mézerville, 2004; Osorio & Cárdenas, 2017). Acknowledging this allows the specialist to recognize that the events that the child or teenager is experiencing result from evolutive changes specific to their age and derive from other events that could lead a person to manifest a series of emotional disorders and have an impact on people's mental health. A stressful situation is defined by the fact that it is necessary to have a crucial adjustment, change, and element to adapt to the said situation (González-Arratia et al., 2020).

Even though the family's protection may partially buffer the impact of stressful situations in children and teenagers, they could also be magnified (Romero et al., 2017). Among the stressor events usually reported within this age bracket, it is possible to find medical stressors, academic stressors such as negative evaluations or feedbacks received by peers or adults, and family conflicts (Somolinos, 2019). These events are related to the need to adapt to family, academic, and social circles and apparent adverse effects caused by maternal separation, negligence, or others.

All these stressful conditions test people's constant adjustment capability, as Mézerville (2004) says: "To survive, every person needs to increase their adjustment processes, both biological and psychological, because being alive means experiencing continuous stress and constant changes that cannot be avoided" (p. 225). This adjustment derives from the idea that we are at the mercy of stress; however, some processes enable stress regulation and are known as coping.

What Is a Problem-Focused Coping Style?

Avoidance of harmful consequences for the body caused by stress can be regulated by coping, divided into styles and strategies. Coping styles are personal inclinations to face any situation and decide which method to use for temporal and situational stability.

According to the cognitive-behavioral theory, a classical definition of coping styles was established by Lazarus and Folkman (1986). They conceptualize it as "constantly changing cognitive and behavioral efforts to manage specific external and internal demands that are appraised as taxing or exceeding the person's resources" (p. 164). Therefore, faced with different situations evaluated by a person as stressful, a person may address response modes either to a problem or to an emotion. According to Lazarus and Folkman's model (1986), a problem-focused coping style refers to those behaviors directed toward problem resolution and alternative solution lookup, which enable problem and resource learning. On the other hand, the main objective of an emotion-focused coping style is to regulate emotional

responses to the distress caused by stressful situations through minimization, selective attention, distancing, and positive comparations.

Recently, other coping strategies such as problem resolution, seeking social support, avoidance, distraction, cognitive restructuration, ruminating, despair and abandonment, social isolation, affective regulation, seeking information, negotiation, opposition and confrontation, and religious rituals have been defined (Echeburúa & Amor, 2019).

According to Ungar (2019), coping patterns have developed since infancy, as learning how to control the environment is achieved from that age. From 8 to 10 years of age, coping styles are more frequently used, such as social support, aggressive actions, direct action, and distraction.

Regardless of age, it is crucial to consider that one coping strategy is not better than another; however, it is believed that the resources a person has, namely, coping resources (e.g., health) and the conditions to manage and diminish distress in people determine a coping mechanism (Lazarus & Folkman, 1986). Thus, the most efficient strategies are those that contribute to a person's well-being. For this reason, the central concept of flexibility arises. Flexibility is needed depending on the situation and on the abilities to face those situations.

Concerning sociodemographic variables such as age, the international literature has pointed out that younger people have more active coping patterns that are problem focused because they are part of changing development contexts (González et al., 2016). In the classical revision study by Fields and Prinz (1997), the authors mention that there is a tendency to use avoidance strategies as well as seeking support during adolescence. When facing academic stressors, they use problem-focused strategies, but there are also reports of emotional strategies. Among the possible explanations, there is the belief that cognitive strategies increase with age; nevertheless, there is still some disagreement with these findings (Uribe-Urzola et al., 2018).

It has been noted that men tend to use more strategies that enable them to face a problem directly, such as negation. On the other hand, women have more emotional coping styles, using strategies that imply verbal communication, seeking emotional support, ruminating about problems, and positive self-talk (González et al., 2016). Additionally, women tend to seek more social support, focus on solving their problems, they care more, seek spiritual help, and fear for the future, unlike men, who tend to seek distractions and ignore the problem (Lotero et al., 2018).

An important point to consider is differences according to the cultural context, which influences how adverse situations are faced (Coppari et al., 2019; D'Anastasi & Frydenberg, 2005). It has been proved that coping mechanisms are varied among youngsters from different countries but similar among compatriots.

For instance, García et al. (2008) mention that teenage girls in Buenos Aires tend to use more social support, look on the bright side, and seek spiritual help more frequently than men. Moreover, Solís and Vidal (2006) and Reyes et al. (2017) mention that men exhibit evasive strategies whereas women seek social support. The same situation is observed with teenagers from Lima (Martínez & Morote, 2001). The investigation by García et al. (2008) with Uruguayan teenagers reports that women use more stress-reducing strategies such as problem sharing, wishful

thinking, and spiritual support, among others, unlike men; it also indicates that the most significant changes happen from early to late adolescence.

There is a series of physical, emotional, and behavioral reactions when facing individual, family, academic, and social problems during adolescence; consequently, discussing coping styles is essential to create—within this age group—abilities to face situations deemed stressful. Namely, using efficient strategies within preventive measures is indisputable as they are associated with more favorable adjustment outcomes and better adaptive capacity in the face of adversity, known in social sciences as resilience (González-Arratia, 2016).

Now, the issue is analyzing which coping mechanisms Mexican teenagers use more and how their effectiveness enables a better adjustment necessary for evaluating strategies in different settings, which will be discussed in the following section.

Research Context in Mexico

To explain the most frequently used coping mechanisms by children and teenagers in different risk situations, a study that provides more understanding about them has been carried out. This research is based upon the model presented by Lazarus and Folkman (1986) in which a person's environment constitutes continuous demands and challenges; thus, the framework of this research also uses Bronfenbrenner's ecological systems theory (1971), owing to the constant interaction between people and their environment; and finally, positive psychology, emphasizing resilience as the structure that helps us to explain these coping mechanisms (González-Arratia, 2021).

Although the study of coping styles is not new, there is still a need to continue analyzing possible strategies used during these stages of life. In this chapter, some outcomes of studies with children and teenagers in different circumstances carried out by González-Arratia (2016) and González-Arratia et al. (2020) are presented. It has been observed that demands in other settings may be different regarding coping mechanisms used to control emotions, and therefore in the functioning process, psychological adjustment, and the capacity for resilience, which is essential for people's mental health.

The first case of interest was to analyze a group of homeless teenagers to determine which coping styles they usually use in a specific situation. Teenage homelessness is a significant health issue in both Mexico and Latin America, as they are an extremely vulnerable group, and studies on their mental health are scarce. For that reason, Castaños and Sánchez (2015) analyzed homeless minors who exhibit depressive and anxious symptomatology and poor psychological adjustment; they also explained that problem-focused coping abilities increase subjective well-being.

The second case study is on knowing which coping style is used by children and teenagers with a background of abuse. Condori's study (2014) revealed a close relationship between coping styles and the potential for child abuse, evasive and problem-focused strategies being the most frequently associated with experience of

abuse. Additionally, González-Arratia (2016) explored coping strategies within this age group. However, there is still a need to investigate how to create actions that enable a psychological adjustment, as the respective research is not conclusive.

Another risky situation of interest to this chapter's authors was the analysis of young offenders. It has been documented that childhood and adolescence are considered critical stages for the beginning of criminal behavior, which has produced several studies about risk and protective factors for antisocial behavior (González-Arratia et al., 2012). Psychology and cognitive-behavioral theory professionals have taken to holding interventions where a "lack of abilities, cognition, and emotions" results in crime (Vilariño et al., 2013, p. 40; Díaz-García and Moral-Jiménez, 2018) using factors such as self-concept, coping strategies, and emotional intelligence. Regarding coping strategies, they could be considered as a protective factor for antisocial behavior. Vilariño et al.'s research (2013) states that the most frequently used coping strategy among young offenders is negative and is not directed toward resolution of the actual problem. Some of them are stress reduction, ignoring problems, and searching for professional help.

Coping mechanisms for life circumstances represent another specific situation that must be analyzed, as is the case in vulnerable groups such as children living in poverty. Some authors such as Godoy-Izquierdo et al. (2008) state that people from low socioeconomic status are more sensitive to stress and generally show less efficient coping responses, which promotes passive, emotional, and evasive stress coping strategies (Palomar, 2015), resulting in its inclusion in the research because certain people become paralyzed under some stressful situations, whereas for others, it increases resilience.

One of the reasons why it is essential to include it in this chapter is that coping styles in the face of uncertainty are too stressful, as is the COVID-19 pandemic. The study by Lazarus and Folkman (1986) mentions the novelty of a situation and its relationship with harm or danger: "a situation by itself could become a threat source" (p. 107) and "without previous experience to the demands of a situation, an opportunity to develop coping mechanisms may not be possible" (p. 107). As such, we have taken on the task of inquiring into the coping styles used by teenagers during a period of confinement, which could become a highly stressful event and provoke a paralyzing effect on coping mechanisms (Lazarus & Folkman, 1986). As such, problem-focused or emotion-focused coping strategies may be helpful, as Roth and Cohen (1986) state, it enables the search for direct resolutions to problems. Among the recommendations given by Gallegos et al. (2020) is a search for information focused on emotions to gain positive temporal benefits, increase of social support, and "recovery of past abilities, capabilities, and skills with which they faced similar situations" (p. 8), as well as resilience to adapt to and overcome a situation.

Emotional reactions in the face of the pandemic have been diverse, from fear, anxiety, excessive worry, insomnia, tremors without reason, among others (Gallegos et al., 2020), as well as essential changes in behavior, psychosocial consequences, and those regarding mental health (American Psychology Association, 2020).

Recently, Brooks et al. (2020) reported the psychological impact of the pandemic in groups of teenagers and adults: general discomfort, depression, frustration, boredom, and hopelessness. It represents high psychological stress in the face of unpredictable situations (Sandín et al., 2020).

Given the complexity of the above diverse situations, they need to be analyzed systematically because of those psychological disorders that arise from them, such as anxiety, depression, and social isolation. To prevent any of them is necessary to take actions related to health.

The information gathered from different circumstances would allow us to identify involved factors and provide a guideline to create intervention programs whose emphasis is on emotional support and psychosocial containment. Next, we briefly refer to our investigative experience of stressful situations.

Empirical Research on Coping Styles in Mexican Children and Teenagers

Recently, the authors of this chapter conducted two projects at the Autonomous University of the State of Mexico. The first is Resilience and Stay in School (González-Arratia et al., 2019; Code 4645/2019SF, Ethics Committee Registration Number 2019/05). The second is called *Resilience and the Psychological Impact of the COVID-19 Pandemic in Different Age Groups* (González-Arratia et al., 2021; Code 2021/SF). Both studies are aimed at analyzing multiple psychological variables that directly impact resilience, one of these being variable problem-focused coping styles. This chapter explores those coping styles most frequently used by a group of children and teenagers living under various psychosocially risky circumstances.

The information obtained belongs to the data collected from a nonprobabilistic purposive sampling composed of 573 children and teenagers from the City of Toluca, State of Mexico. The participants have an age range of 11–15 years; 360 are boys and 213 are girls. Owing to the conditions of the different psychosocial risk situations, we have divided them into five groups as follows: Group 1 composed of 64 participants from the group of homeless boys; Group 2 composed of 60 boys/girls and teenagers who belong to the group imprisoned for various crimes (50 boys and 10 girls); Group 3 composed of 155 participants living in children and youth shelters of the DIFEM System, State of Mexico with a background of physical or psychological abuse (78 boys and 77 girls); Group 4 is composed of a total of 192 participants who belong to different public elementary schools considered to be highly marginalized and poor (142 boys and 50 girls); Group 5 composed of a total of 102 boys and teenagers (26 boys and 76 girls) during the COVID-19 confinement period from March to August 2020. The subjects live in the City of Toluca, State of Mexico, or in nearby areas and municipalities such as San Felipe del Progreso, San Andrés Cuexcontitlán, San Pedro Totoltepec, Metepec, Zinacantepec, and others such as Atlacomulco and Zumpango that according to the National Population Council indicators are classified as highly marginalized (CONEVAL, 2014).

A questionnaire with sociodemographic data including questions on age, sex, and level of education was given to all participants. Coping styles were measured using the Multi-dimensional and Multi-situational Scale of Coping Styles by Góngora and Reyes-Lagunes (1998), which measures coping as a trait. It consists of 18 items that begin with the following instruction: '*When I have problems in life I…*' (general situation), and a Likert scale format with seven response options with squares of different sizes ranging from always to never. It measures four factors:

- Factor I: Positive Reappraisal. When a person does something to solve a problem trying to learn or think positively.
- Factor II: Negative Emotional. When a person expresses a feeling or emotion that does not lead directly to the resolution of a problem.
- Factor III: Avoidance. When a person expresses a feeling or emotion that does not directly solve a problem and tends to avoid or escape from it.
- Factor IV: Social Support. When a person considers others to solve a problem, either to analyze or to clarify it.

In previous studies, this scale has been applied in the case of children with relevant validity and reliability indexes for these groups (González-Arratia et al., 2014).

This research was carried out with authorization from the different institutions, public schools, and parents or guardians' informed consent, all of whom participated voluntarily, anonymously, and confidentially. The instrument was applied collectively to the study group in different scenarios in-person during January and February 2020. In Group 5, the application was made online as it happened during the confinement of the COVID-19 pandemic from March to August 2020.

Among the primary descriptive outcomes, it is possible to point out that the average scores indicate that the Positive Reappraisal coping style is slightly higher in the homeless children group. As for the Negative Emotional style, which is the presence of an emotion that does not lead to a problem resolution, it is exhibited to a greater extent in children living in extreme poverty, whereas the group of children in confinement experienced the lowest levels. Regarding the Avoidance coping style, it is more frequently used by the group of young offenders; meanwhile, Social Support is the style most commonly used by children with a background of abuse (Table 9.1).

Table 9.1 Descriptive data on coping styles and psychosocial risk situations

Coping styles	Group 1 (n=64)		Group 2 (n=60)		Group 3 (n=155)		Group 4 (n=192)		Group 5 (n=102)	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Positive reappraisal	5.60	0.81	5.59	0.85	4.85	0.93	5.39	0.78	5.34	0.79
Negative emotional	4.52	1.15	4.69	0.93	4.72	1.27	4.76	1.29	4.39	1.16
Avoidance	5.07	1.19	5.27	1.04	4.73	1.24	5.07	1.11	4.37	0.89
Social support	5.02	1.31	4.97	1.25	5.35	0.95	4.93	1.17	4.39	1.08

Group 1 homeless children; Group 2 young offenders. Group 3 children with a background of abuse; Group 4 children living in extreme poverty; Group 5 children confined owing lo COVID-19

A descriptive analysis was made based on average scores as a statistical test was not performed because the groups were not homogeneous. Thus, the possible differences between boys and girls from the different groups are observed among the mean results. From this analysis, it can be deduced that the children in Group 3 (boys and girls with a background of abuse) tend to use the positive reappraisal coping style to a greater extent, it explains how a person solves a problem by trying to learn or see the positive side of the situation. In contrast, girls imprisoned for delinquent behavior showed a slightly higher average than girls from other groups. As for the negative emotional coping style, it was found that both boys and girls living in extreme poverty (Group 4) scored highest in the use of this type of strategy. Meanwhile, data indicate that the group of young offenders (Group 2) have the highest scores in using the avoidance style, whereas boys and girls with a background of abuse use it to a lesser extent. The social support coping style was used more by boys with a background of abuse and girls in juvenile detention centers (Table 9.2).

The scale for measuring coping as a condition was included specifically for children and teenagers confined because of COVID-19. Questions about the situation that began with "*When I have problems with my health…*" were included. Three factors were considered: factor 1 emotional avoidance (when a person expresses a feeling or emotion that does not solve a problem directly and tends to avoid or escape from it); factor 2 direct (when a person does something to solve a problem); factor 3 revalorative (when a person gives a positive meaning to the problem, tries to learn from a situation or somehow improve his or her perception of it). From this analysis, it was found that the most frequently used strategies are revalorative strategies, then the emotional avoidance coping style, and, finally, direct strategy. Table 9.3 reports data from the Student's *t* test to determine differences among coping styles related to health between boys and girls; no statistically significant differences were found. The average scores suggest that boys tend to use more emotional

Table 9.2 Descriptive data on coping styles by psychosocial risk and gender

Copíng styles	Group 2 (n = 60)		Group 3 (n = 155)		Group 4 (n = 192)		Group 5 (n = 102)	
	Boy (n = 50)	Girl (n = 10)	Boy (n = 78)	Girl (n = 77)	Boy (n = 142)	Girl (n = 50)	Boy (n = 26)	Girl (n = 76)
	Mean (SD)							
Positive reappraisal	5.51 (1.01)	5.84 (0.48)	5.65 (0.75)	5.54 (0.77)	5.03 (1.19)	4.64 (1.07)	5.45 (0.59)	5.30 (0.85)
Negative emotional	4.68 (1.15)	4.17 (1.42)	4.58 (1.27)	4.77 (1.19)	5.40 (0.82)	5.37 (0.68)	4.02 (1.35)	4.52 (1.07)
Avoidance	5.19 (1.08)	5.55 (1.27)	2.50 (0.30)	2.54 (0.34)	4.73 (1.24)	4.83 (1.44)	4.47 (0.62)	4.33 (0.97)
Social support	4.88 (1.27)	5.40 (1.13)	5.31 (0.96)	5.38 (0.94)	5.11 (1.13)	4.98 (1.05)	4.14 (0.91)	4.48 (1.12)

Group 1 homeless children; Group 2 young offenders; Group 3 children with a background of abuse; Group 4 children living in extreme poverty; Group 5 children confined owing to COVID-19
Group 1 was not included in these data as it consisted only of boys

Table 9.3 A descriptive analysis of coping styles as a condition for health problems

	Total	Group 5 $n = 102$		t	p
		Boys ($n = 26$)	Girls ($n = 76$)		
Copíng styles	Mean (SD)				
Emotional avoidance	4.27 (0.77)	4.30 (0.64)	4.25 (0.82)	0.27	0.78
Direct	4.26 (0.91)	4.19 (0.95)	4.29 (0.91)	−0.46	0.64
Revalorative	4.39 (1.11)	4.45 (1.16)	4.36 (1.09)	0.32	0.75

Group 5 children confined by COVID-19

Table 9.4 Concern about COVID-19 in children's and teenagers' response percentage

Item	Response percentage %			
	Not at all	Very little	Somewhat	To a great extent
1. During the last week, how often have you thought about the probability of being infected by COVID-19?	31.4	27.5	27.5	13.7
2. During the last week, has the thought about the probability of being infected by COVID-19 affected your mood?	49	29.4	11.8	9.8
3. During the last week, has the thought about the probability of being infected by COVID-19 affected your day-to-day activities?	50	31.4	10.8	7.8
4. How much do you worry about the possibility of being infected someday by COVID-19?	7.8	16.7	30.4	45.1
5. How often do you worry about the possibility of being infected by COVID-19?	11.8	32.4	29.4	26.5
6. Is being infected by COVID-19 a big problem for you?	15.7	24.5	26.5	33.3

avoidance and revalorative strategies. In contrast, girls, who are faced with a health situation, tend to more frequently use a direct strategy, namely, they do something to solve the problem.

The scale of Ruíz et al. (2020) was used for study concerns about COVID-19 in this group of children and teenagers. The scale has six items and four response options (1 "not at all" and 4 "to a great extent") as the possibility of becoming ill is likely to impact a person's behavior. After testing, the data showed that 31.4% of the participants have not thought about the probability of being infected by COVID-19, 49% mentioned that this had not affected their mood, and 50% acknowledged that it had not affected their ability to carry out their daily activities. On the other hand, it is essential to mention that 45.1% consider to a great extent the possibility of being infected someday. Regarding the question of whether they are worried about being infected, 33.3% answered "to a great extent" (Table 9.4).

An interesting fact about teenagers' concern regarding COVID-19 is that there are no significant differences when applying Student's t test; however, the mean indicates that women have a more substantial concern than men. Table 9.5 shows that girls seem to have a greater predisposition toward thinking about the possibilities of being infected by COVID-19. As a result, it affected their mood, their ability

Table 9.5 Differences between boys and girls regarding their concern about COVID-19

Item	Boys (n = 26)		Girls (n = 76)		t (p)
	Mean	SD	Mean	SD	
1. During the last week, how often have you thought about the probability of being infected by COVID-19?	2.15	0.96	2.26	1.07	−0.48 (0.63)
2. During the last week, has the thought about the probability of being infected by COVID-19 affected your mood?	1.61	0.85	1.89	1.02	−1.36 (0.17)
3. During the last week, has the thought about the probability of being infected by COVID-19 affected your day-to-day activities?	1.61	0.80	1.81	0.97	−1.03 (0.30)
4. How much do you worry about the possibility of being infected someday by COVID-19?	3.03	0.82	3.15	1.00	−0.60 (0.55)
5. How often do you worry about the possibility of being infected by COVID-19?	2.53	0.98	3.15	0.99	−0.99 (0.32)
6. Is being infected by COVID-19 a big problem for you?	2.69	1.01	2.80	1.10	−0.44 (0.65)

to carry out day-to-day activities, and their concern is more frequent, representing a problem.

Similarly, a Pearson's r correlation analysis was carried out to determine if there is a connection between coping styles related to health and concern about getting sick with COVID-19. The results indicate that only the direct coping style is significantly associated with being infected with COVID-19 (r = 0.26, p = 0.008). No significant relationships were found for the rest of the variables.

Conclusions

Interest in the study of coping styles in the face of problems has been critical in psychology. The literature points out that people evaluate the situation when faced with different life situations and set in motion mechanisms that enable them to achieve a certain degree of psychological adjustment, allowing them to function adequately. Theoretical and methodological advances indicate that the model of Lazarus and Folkman (1986) enables an understanding of these mechanisms. Therefore, studies from a cognitive approach are still carried out. The evidence suggests that the use of direct coping styles, particularly by children and teenagers, provides excellent mental health, well-being, and resilience (González-Arratia, 2016). Thus, a problem-focused coping style construct can be considered an essential protective factor because it allows a person to analyze several available options to solve adverse circumstances.

The different conditions analyzed in this chapter are considered a relevant source of stress, and analysis of them allows us to glimpse what can be done in each situation. Based on the data obtained, it was observed that the coping style most

frequently used is passive reappraisal, regardless of its circumstance. This conclusion is interesting, as it may be an indicator that children and teenagers have the capacity, to some extent, of knowing what to do in the face of a problem, except for the group of children living in poverty, who exhibit more frequently a negative emotional coping style. This statement is in agreement with Palomar (2015), who said that the most disadvantaged groups tend to use less effective strategies, which may be because children have little control over situations such as family finances.

It is also important to note that, in the case of the group of children with a background of abuse, the coping style that occurs to a greater extent is social support and is most frequent in girls. This statement is relevant, as somehow girls living under these circumstances consider the option of seeking help, possibly as emotional support in the face of situations in which they have been victims, such as violence, abuse, psychological abuse, or neglect (González-Arratia, 2016). As a result, there must be consideration of the government's actions, Human Rights, and Child Services to achieve better development of minors, as psychosocial consequences affect the relationship between children and their primary caregivers, which is fundamental for their physical, social, and emotional development. However, if a relationship is based on violence, it has a severe impact on the child, mainly because it has been established that minors with a background of abuse can develop anxiety, depression, risky health behaviors, low self-steem or trouble establishing interpersonal relationships (González-Arratia, 2016).

Another important aspect to consider is that young offenders tend to use an avoidance coping style, which, according to the authors of the scale used in this study (Góngora & Reyes-Lagunes, 1998), refers to when a person expresses a feeling or emotion that does not solve the problem directly and, instead, tends to avoid or escape from it. Consequently, it could be helpful to mitigate stress in the face of circumstances and regulate an emotional response. Therefore, it is likely that this style could be used to minimize both avoidance and the problem with which they find themselves. Similarly, these results are in agreement with Arce et al. (2010) in the sense that "the presence of unproductive coping strategies characterizes coping strategies in juvenile offenders," as stated by Vilariño et al. (2013, p. 43) and, recently, by Bejarano (2019). However, further analysis is required to verify this possibility.

Regarding the group of homeless children, it was found that they tend to use a passive reappraisal coping style more frequently, which is in agreement with other studies conducted in groups of Mexican teenagers (Espinosa, 2004). Reyes et al. states that this coping style probably prevails in our culture (2017); such a consideration would be helpful in analyzing a problem to solve it.

For children and teenagers who were studied during the lockdown due to COVID-19, coping strategies were noted to be directed toward both problem resolution and emotion, which are then used to cope with stress and, consequently, determine their behavior and their manner of interaction under stressful circumstances. When inquiring about coping styles with regard to a health issue, the most frequently used is the revalorative style, which would indicate that the interviewees think about and reflect on the situation, as in the case of the pandemic. Given these

circumstances, it is necessary to delve deeper into emotions experienced by teenagers as it would be helpful to determine the true psychological impact of confinement. Authors such as Chew et al. (2020) state that coping responses regarding infectious diseases can be classified as either positive (problem resolution) or negative (distraction and denial). To date, research related to COVID-19 in Mexican models has demonstrated that there are differences between men and women, as women are more prone to worry, anxiety, and fear than men (Ramos-Lira et al., 2020). Hence, it is worthwhile continuing to analyze other models and even compare other groups of young people from different countries to verify the prevalence of this coping style, which would allow more functional and adaptive behavior under current conditions.

Regarding concerns about the presence of COVID-19, most of the participants were not worried about the possibility of being infected; however, they were concerned about it being a significant problem. One possible reason was that they consider that their reference group had not yet contracted the virus, or they thought that the virus was far away, which was also a problem, as their freedom to go out, hang out with friends, or others was restricted (Brooks et al., 2020). To confirm these findings, this will become a study subject as it is believed that confinement has negative consequences. Still, at the same time, it is possible to think of favorable conditions, which are essential for future research.

Based on the results from different risky situations, it was proved that differences between children and teenagers are minimal; thus, further research is still required to test this hypothesis. However, available data showed that boys use more problem-focused strategies, whereas girls use emotion-focused ones, which is in agreement with the literature. Nevertheless, it is necessary to continue to analyze this trend in different risky situations because each case represents an unexpected event that triggers a crisis. Still, people's psychological resources could denote that a life experience is accepted or highly disturbing. In short, "events are evaluated according to the amount of social readjustment they require" (Lazarus & Folkman, 1986, p. 133).

Although this is a descriptive study, there is evidence that coping styles can be defining sources of stress in different situations. Thus, it is essential to analyze their degree of stress and continue researching different strategies used among children for those risky situations to which they are exposed. The possibility of providing skills through courses and workshops that enable them to cope with different problems to achieve good mental health and well-being, despite experiencing adverse conditions, should also be considered.

Childhood and adolescence constitute highly vulnerable stages of life owing to the influence of individual, family, academic, and social risk factors associated with emotional distress, behavioral and developmental problems, and even other psychological disorders. Hence, it is possible to consider that those coping strategies are a vital psychological resource that allows for a better adaptation to environmental demands.

Concerning coping mechanisms for different risky circumstances, only some examples of extraordinary situations in which many children and teenagers live were considered. Still, it is essential to factor other variables into the theoretical

models in order to have a better understanding of the interactions between them. For example, family is a factor that could become a stressor, as intra-family relationships, their structure, dynamics, and the system, in general, could have adverse effects on those coping styles shown by children. Conversely, it could have a positive impact, as, in certain circumstances, the family could act as a protective factor, which should be considered when developing theoretical models (González-Arratia, 2018).

Each stressful event is undoubtedly determined by the moment it happened, the person's age, its frequency, intensity, chronicity, and degree of uncertainty, meaning that they can be differential. It should also be noted whether, at the time of the stressful experience, protective factors were available or not, as they may increase or dampen its impact (González-Arratia, 2021). Despite these methodological drawbacks, we believe that it should be made clear that children and teenagers have the possibility of implementing mechanisms that somehow protect them in the face of a stressful experience. As a result, the research on different coping styles also considers the sum of adverse circumstances and the absence of protective factors, leading to psychological disorders.

Thus, from our perspective, a person is in constant interaction with the environment, alongside the fact that each psychosocial risk situation is multicausal. Then, it is essential to include other personality and sociodemographic variables that allow a greater understanding of different ways of coping with adversity so that a statistical strategy would be using structural equations. Our results lead us to consider that the study of coping styles still requires more basic and applied research. Even though stress is a part of life, skills that enable the creation of behaviors associated with individual and social well-being are needed.

Final Considerations and Planning

Coping strategies are necessary for the adjustment of people to environmental demands. When they result in a person's well-being, it is possible to say that the appropriate strategy for a given situation has been used.

The fast development of our Latin American societies, in which social, economic, and educational inequality prevails, increasingly demands a functional and adaptive response to context even beyond the previous functioning, especially during these conflicting times due to health issues, which suggests a complex psychological process. From our perspective, responses to adverse events require a positive reappraisal, which predicts greater well-being and results in resilience (González-Arratia, 2021).

For children and teenagers, the opportunity to learn to use coping strategies in different contexts is undoubtedly necessary. For example, how can diverse coping styles be expressed in an educational context? After all, school is a place where high levels of stress are usually developed owing to the demands of evaluations and peer relationships. This idea suggests that school is a setting that promotes the learning

of life skills, boosts self-esteem, and identifies personality strengths essential to overcome uncertainty and the setbacks of life.

An integral education of children and teenagers is indispensable; therefore, it would be interesting for future research to analyze a series of intimately linked variables to different ways of acting in the face of problems. A line of research we propose is delving deeper into the impact of COVID-19 on children and teenagers; teaching them how to identify those variables. First we should identify personal strengths and give children and teenagers opportunities to practice them. At the same time, teach them that there are different options available when facing a problem and let them know that there will always be someone that could provide support or counseling.

Stressful experiences are multicausal, and the same can be said about those that require the use of different coping styles; thus, our future theoretical models should incorporate several factors to analyze more accurately those that have a direct or indirect effect. For future explanatory models, the results may be differentiable owing to developmental changes during childhood and adolescence, as a coping mechanism may be an influencing factor because of age.

Coping styles in children and teenagers are a topic that can be approached from research, academic, and clinical contexts, and the field of prevention. Nowadays, there are countless individual and group therapies that reduce pain and anxiety due to life itself. The truth is that it is necessary to continue researching and analyzing those therapies that are beneficial for healthy functioning.

The study of coping styles is broad and systematic; therefore, health professionals, psychologists, educators, and social workers need to put coping styles into practice with innovative resources such as programs and workshops designed by age and context of reference that allow children to experience them creatively, as, usually, children are the ones who find how to be happy despite adversity.

The scope of this study focused on the analysis of coping as an individual variable of minors exposed to contexts of adversity from a cognitive-behavioral viewpoint. However, we acknowledge that these findings need to be complemented by other theoretical perspectives and the study of other factors that interact with the person and lead us to understand which social determinants underlie adversity, stress, and coping. As well as the development of culturally relevant psychological instruments, whose psychometric properties allow us to identify the possible differences and/or similarities according to the context of development; thus, it is still necessary to provide more evidence for the measurement of the construct, which leads to the need to carry out transcultural research to understand how to face the various stressful situations in these age groups and in different social contexts.

We believe that having the ability to adapt and adjust despite difficult and adverse circumstances in a practical manner to losses or traumatic events requires our resilience to be tested. Positive psychology is an option for stress management for people to overcome adversity with a certain degree of success. Likewise, we know that to understand stress and coping styles, with affective-emotional, cognitive, and behavioral elements, more complex analysis is needed to study interactions between a person and his or her sociocultural environment. Addressing an immediate or

closer (micro) context and acknowledging more distal situations is required as events from the most intimate settings may have more meaning for a person than the distal ones. In this sense, it is considered that the study of coping styles would be enriched by approaching it through Bronfenbrenner's ecological model (1971).

We could not close the chapter without reflecting and looking critically at the adversity faced by these minors. Study of homeless children, minors who are victims of abuse or live in poverty, and young offenders should make us realize that some of our children and teenagers live under adverse conditions for which they hold no responsibility. Indeed, they live in situations beyond their control that demand them to make efforts that are not consistent with their age. These minors face challenges that leave them no choice but to develop strategies to adapt and survive in a dangerous world created by an indifferent, unequal, and unjust society. It does not provide them with the conditions necessary for optimal development; instead, it provides them with conditions that compromise their future life. These adverse conditions should not exist. Nevertheless, they do in Latin American countries, where social protection and human rights do not include these minors, who live in situations of psychosocial risk.

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Chapter 10
Juvenile Delinquency in Brazil: Development of Adolescents in Adverse Contexts

Marina Rezende Bazon and André Vilela Komatsu

Introduction

Latin America is the most violent region in the world. The subcontinent has the highest homicide rates, according to a United Nations' report (United Nations Office on Drugs and Crime [UNODC], 2019). Of the total homicides recorded worldwide, 37% were in Latin America, which concentrates only 8% of the world population. The rate per 100,000 inhabitants is twofold compared with that calculated for Africa, almost four times as high as in North America, and approximately 30 times higher than in Europe (World Bank, 2020). People aged between 15 and 25 years are the most vulnerable social group. The likelihood of a young man in Latin America being murdered is 30 times greater than in Europe and more than 70 times higher than in countries like Greece or Ireland, for example (Waiselfisz, 2008).

Specifically in Brazil, there has been a reduction in the rates of homicides and other violent crimes, such as assaults, robberies, and rapes, since 2018. However, in that year 65,602 homicides were recorded, a historical record that amounted to 31.6 deaths per 100,000 inhabitants (Cerqueira et al., 2019). Approximately half of these homicides victimized young people aged 15–29. The homicide rate for this age group is approximately 70 deaths per 100,000 inhabitants, similar to those extremely poor and/or in-crisis countries, such as Honduras and Venezuela (Cerqueira et al., 2019). Brazil, however, is not an extremely poor country like Honduras, nor is it in

M. Rezende Bazon (✉)
Faculty of Philosophy, Sciences and Letters, University of São Paulo, São Paulo, Brazil
e-mail: mbazon@ffclrp.usp.br

A. Vilela Komatsu
Center for the Study of Violence (NEV-USP), Department of Sociology, Faculty of Philosophy, Languages and Human Sciences, University of São Paulo, São Paulo, Brazil
e-mail: avk@usp.br

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a humanitarian crisis like Venezuela, which imposes the need to consider other social variables linked to these high rates of violence.

According to a survey carried out in some Latin American countries, including Brazil (Waiselfisz, 2008), the concentration of income seems to be a more relevant variable. For the set of data analyzed, the unequal distribution of income explains 59.7% of the variability in homicide rates. Among the young population, the predictive power is even higher (63.5%), indicating greater vulnerability of this segment to phenomena derived from distributive injustices. In addition to inequality, it is possible to point out other factors such as organized crime, rival factions in some territories, the wide availability of firearms, as well as the public security policy, focused on the model of police coercion (Soares & Ribeiro, 2018).

Most of the everyday violence does not end in death and not all violent deaths are linked to delinquency and crime. But it is true that the violent deaths of young people, in the context of criminalized activities, represent the most extreme outcome of social conflicts that underlie all other forms of violence. They reflect the precariousness (or the absence) of infrastructure, the strength of cultural, political, and social mechanisms of exclusion of certain segments, as well as new sociabilities, indicating that the traditional institutions of primary socialization—family, school, and community—do not seem to meet the demands and needs of youth. Besides these societal mechanisms linked to the crime rates and violent deaths of young people, there is a widespread belief in society that young people, especially the poor, are potentially dangerous, and responsible for the increase in violence, legitimizing a policy of hardening the actions taken by formal control agencies, such as ostensible policing in poorer areas (National Association of Centers for the Defense of the Rights of Children and Adolescents, 2007). As a consequence, there is a practice of mass incarceration/detention of young individuals (Fórum Brasileiro de Segurança Pública, 2015), in addition to the deaths in police conflicts, which are added to the other violent deaths (Fórum Brasileiro de Segurança Pública, 2019).

The aim of this chapter is to contribute to the reflections and debate on juvenile criminal violence. We present a set of research studies carried out in a Brazilian socio-cultural context, with adolescents from different economic levels and socio-cultural contexts. These studies describe the deviant and criminal behaviors of adolescents, as well as the characteristics of their social relationships, seeking to apprehend the dynamics of the interactions between the factors associated with criminal conduct. Without disregarding the macro-social variables—inequality, organized crime/factions, and the current security policy—the implemented studies focus on more proximal factors, belonging to the microsystems most relevant to the socialization of young people, aiming to better understand the related processes linked to different levels of juvenile criminal violence in the Brazilian socio-cultural context. All studies were carried out in the Group of Studies and Research on Development and Psychosocial Intervention of the School of Philosophy, Sciences, and Letters of Ribeirão Preto, University of São Paulo (GEPDIP-FFCLRP/USP).

The Phenomenon of Juvenile Delinquency from the Perspective of Developmental Criminology

Owing to the complexity of human development, especially in adolescence, the socialization problems of young people deserve an equally complex approach. Adolescence is a period in which the manifestation of deviant behaviors is more likely, reaching a peak at around 16 or 17 years of age and declining at the end of adolescence and the first years of adulthood (Farrington et al., 2013). Most male adolescents commit some crime during this period, although prevalence varies by country, method, and measurement instruments (Barberet et al., 2004; Komatsu & Bazon, 2015; Le Blanc, 2003; Loeber et al., 2015). Of this contingent, a relatively small subgroup—between 5 and 10%—is responsible for more than half of the crimes committed by this age group, including most of those acts considered violent (Farrington et al., 2006; Komatsu & Bazon, 2017; Piquero, 2000). This means that, although the majority of young individuals restrict themselves to practicing one or a few offenses, a minority practice many offenses, including the serious ones (those who threaten another person's life or physical health), denoting an atypical pattern of conduct, in comparison with the typical pattern (statistically normal) (Farrington et al., 2006; Le Blanc, 2003).

Evidence for the "age-crime" relationship, as well as for the existence of different levels of involvement with crime/delinquency, has fostered studies of the "trajectories of criminal conduct" from a multidisciplinary and developmental perspective (Farrington et al., 2006; Le Blanc, 2020). The adoption of this perspective flourished in criminology, as a scientific discipline, in the last 90 years, since the pioneering studies on "criminal careers," by Sheldon Glueck and Eleanor Touroff Glueck, at Harvard Law School, between the 1930s and 1950s (Glueck & Glueck, 1930, 1959). This perspective is becoming one of the prevalent approaches in the area, today called Developmental Criminology, anchored in the developmental paradigm, according to the definition that has been consolidated more recently (Cicchetti, 2006). Thus, developmental criminology is interested in the "*biological, psychological, social and cultural processes and how the interaction between these multiple levels of analysis can influence individual differences, the continuity or discontinuity of patterns of adaptive or non-adaptive behaviors, and the trajectories through which the typical and atypical development outcomes are achieved*." Its ultimate goal is to explain the development of individual patterns of antisocial conduct.

From this perspective, the focus is the criminal conduct manifested (self-revealed) over time to describe the trajectories and to identify the complex combination of personal/developmental, relational, social, and cultural variables linked to the different patterns of criminal conduct identified. Classical studies have proposed the existence of two meta-trajectories, as a synthesis of two patterns of conduct: common/typical delinquency (to refer to occasional criminal activity, limited to adolescence) and distinctive/atypical delinquency (to refer to repeated criminal activity, persistent over the course of life) (Le Blanc, 2003; Moffitt, 2018). Common

delinquency encompasses trajectories that are limited to a few offenses, generally (but not always), of low severity. It would emerge because of the circumstances and occasional opportunities, most of the time related to leisure activities in the company of peers and would not represent a serious criminal engagement. Distinctive delinquency (sometimes referred to as persistent delinquency) encompasses the trajectories of criminal conduct known as chronic, constituted by the frequent and persistent practice of crimes throughout adolescence and, sometimes, beyond this stage of life. It would signal a significant developmental gap for adolescents, resulting from a series of problems/difficulties and negative experiences that accumulate and become complex since childhood (and, sometimes, from adverse conditions in the prenatal period) (Moffitt, 2018). Distinctive delinquency would lead to significant criminal engagement, which is characterized by the early onset of criminal conduct (during early adolescence, or before), high frequency, and polymorphic (diverse), sometimes including violent crimes (Le Blanc, 2002, 2003).

Several research studies have focused on the identification of factors that significantly interfere in the course of criminal conduct and may explain why some individuals develop a distinctive pattern of delinquency (Assink et al., 2015; Farrington et al., 2016). Through the data produced, integrative theories were elaborated, aiming to explain the significant criminal engagement, each one prioritizing a particular set of relevant factors or domains. Among the most prominent, there is the multilayered Personal and Social Control Theory (PSCT) of Criminal and Antisocial Behavior, whose main author is Marc Le Blanc, professor emeritus at the School of Criminology and Psychoeducation at the University of Montreal, Canada. It is a very comprehensive framework, which presents a complex model of reciprocal influences between variables that contemplate multiple domains, based on the evidence produced in the Montreal Two Samples Longitudinal Study (Morizot & Le Blanc, 2003, 2005). The PSCT has its background in the Social Bond Sociological Theory, proposed by Travis Hirschi (1969). These theories were guided by a question that was the reverse of what was asked up till then: "*why do people respect the laws?*" (Hirschi, 1969, p. 10).

To understand the development of criminal conduct, Le Blanc (2006) indicates the importance of three different systems that interact and influence each other:

1. The system that describes the deviant behavior itself.
2. The social controls to which the individual is subjected.
3. The self-control that describes which individual/personality aspects are related to the regulation of deviant behavior. Concerning the system that describes deviant behavior, the developmental approach requires changes and continuities over time to be observed as it considers the temporal ordering to be more relevant than acts taken in isolation. It should be noted that, from this perspective, one can think about the phenomenon according to the functionality that certain behaviors can play in the different stages of development. Thus, criminal conduct can be established as a structured way of functioning for the individuals,

according to the consequences that their coping strategies have for the environment in which they operate (El Sayed et al., 2016).

Regarding the variables related to social controls, the conduct would be regulated based on the interaction between variables related to three mechanisms:

1. Bond to society and its members.
2. Constraints exercised by social institutions and people as a reaction to deviant/antisocial behavior.
3. Social models, related to exposure to antisocial influences and opportunities (as opposed to prosocial ones) (Le Blanc et al., 1988; Le Blanc, 2003). The social bond concerns the various ways in which individuals remain together and connected emotionally. The bond is established via social institutions and their members and reflects a primary need of every individual of being integrated into a social and cultural reality. The social bond is a fundamental protection against deviant behavior, ensuring compliance with conventional standards of conduct. In operational terms, it is based on attachment to people, investment in conventional activities, and attachment/commitment to social institutions, their values, and norms.

Social constraints regulate compliance with rules and norms through social reactions to deviant/antisocial behavior. The constraints can be formal or informal. Formal constraints refer to sanctions imposed by social institutions such as the school, the police, and the justice system, whereas informal constraints refer to the reaction of people with whom the adolescent has close relations, such as family and friends. Informal constraints are manifested through rules, supervision, and punishment. The experience of formal and informal constraints is likely to produce internal constraints. This refers to the control of behavior by internalizing the rules conveyed in different institutions—family, school, and society in general; it is, therefore, adherence to conventional social rules. In developmental terms, the external constraint precedes the internal one in the socialization process. However, it is the internal constraint that works as the last barrier to the manifestation of deviant behavior in adolescence.

The social models refer to the existence of social standards that shape behavior. Prosocial models, including influences and opportunities, guarantee conformity, as they promote, through modeling and vicarious learning, the manifestation of prosocial behaviors. Antisocial models, in turn, refer to the learning processes of antisocial behaviors, which occur, for example, when one is in contact with a criminal subculture and routinely exposed to situations of violence, in a community characterized by a high rate of crime, for example (Le Blanc et al., 1988; Le Blanc, 2003, 2006, 2010).

Personal variables are also relevant to the general regulation of conduct. These refer to an individual's psychological development. Psychological development, represented in the notion of a developmental continuum between egocentrism and

allocentrism, refers to personal acquisitions related to natural development and the consequent ability to differentiate the self and the other and the capacity for self-control/self-regulation. Thus, this personal mechanism of conduct regulation involves some traits and aspects that are built from social interactions, such as social orientation—beliefs, values, and attitudes. Under its systemic and dynamic character, the PSCT assumes that the social and personal mechanisms of regulation are related and inter-influenced (Le Blanc et al., 1988; Le Blanc, 2003, 2006; Bazon et al., 2011).

The interactions between the multiple variables in the systems described produce an increase or decrease in the probability of offending. Thus, the criminal conduct for an individual can be activated and maintained over time if the link with society is weakened, if the constraints are inadequate (many external and formal constraints), if the deviant models are abundant (in comparison with the models and prosocial opportunities) and if their psychological development, especially in terms of self-regulation, falls short of that expected for their age group (Le Blanc, 2003, 2006; Bazon et al., 2011). Le Blanc (1997, 2006) indicates that social bonds and psychological development (self-control) are the most stable mechanisms of conduct regulation, with greater predictive power in the long run, even though their influence is indirectly influenced by models and constraints. These mechanisms involve variables that exert more direct influences on behavior and, at the same time, are more susceptible to rapid changes over time.

Most of the variables that compose the mechanisms have been empirically tested from longitudinal studies and their influence is described in theories called "middle-range theories." In conjunction with the theorizing around the role of self-control, the general reasoning of the PSCT is applied in the middle-range theories pertaining to social control, considering microsystems such as family, school, and peers (Le Blanc, 2003). This framework has been adopted for the undertaking of research studies in the Brazilian socio-cultural context, at the Group of Studies and Research on Development and Psychosocial Intervention (*Grupo de Estudos e Pesquisa em Desenvolvimento e Intervenção Psicossocial*, GEPDIP), for almost 20 years. Despite the challenge that such an approach imposes on research designs, several studies have been carried out and, together, allow a very consistent panorama to be drawn regarding the phenomenon in question. This chapter presents the studies that focused on proximal social controls, only, guided by the question of how many of the main notes from the perspective of the PSCT framework would be verifiable in the Brazilian context. In specific terms, some of the questions that were initially asked were the following: Would the different patterns of criminal conduct described for young people, related to meta-trajectories, be verifiable in our socio-cultural context? If so, what would these patterns be, considering economic class and gender? Which social variables would stand out in the differentiation between the patterns identified, considering economic class and gender? Which social variables are most related to involvement in violent crimes? Would the Brazilian juvenile justice system be sensitive to the differences identified and described?

The Contributions of the Group of Studies and Research on Development and Psychosocial Intervention

Studies on Patterns of Offending Behavior in Adolescence

The first studies implemented at the GEPDIP used a traditional methodology, comparing groups of young people, to ascertain significant differences. The results of cross-sectional studies with samples of adolescent offenders (recruited in programs of law enforcement and the juvenile justice system) and adolescents without a history of judicialization (recruited in public and private schools) allowed different patterns of deviant and criminal behaviors to be identified, through self-reported delinquency data, with particularities associated with both socioeconomic level and gender. The findings regarding the patterns of offending, socioeconomic status, and the gender of the young people were mainly due to the development of three projects that used the same methodology with samples from different populations: Komatsu (2014) studied a mixed sample of male adolescent offenders (MAOs; $n = 60$) and non-offenders (MANOs; $n = 133$) from public schools; Visioli (2017) studied a sample of male adolescent non-offenders (MANOs; $n = 324$) from private schools; Salgado (2018) studied a sample of female adolescent non-offenders (FANOs) from the public ($n = 725$) and private ($n = 448$) schools. Besides, another two projects focused only on samples of judicialized adolescents: Bono (2015) studied the problem with substance use in adolescents arrested by the police (MAOs; $n = 120$) and Komatsu (2019) followed up adolescent offenders for 2 years in order to identify factors associated with trajectories of violent conduct (MAOs; $n = 130$).

In all these studies, similar computational and statistical methods were employed, based on clustering procedures supported on parameters of criminal engagement, such as age at the onset of deviant/criminal behavior, diversity, and offending frequency. In the initial studies (Komatsu, 2014; Komatsu & Bazon, 2015, 2017), we identified five groups/clusters related to patterns of criminal conduct significantly different from each other, and different concerning problems in the family, school, and relational domains (Table 10.1). Cluster 1 (comprising 23% of the sample, all from public schools) consisted of adolescents with a mean age of 14.7 years old who have never committed any crime in their lives (abstainers). They also do not use illicit substances, nor do they present relevant problems in the family, school, and relational domains. On rare occasions, they would use alcohol. They presented good social adjustment. In the study with adolescents from private schools, representing the wealthiest social classes (Visioli, 2017), 44% of the sample would be part of the abstainer group, indicating an important difference in the prevalence of this pattern of conduct associated with socioeconomic level. In the study with girls from public and private schools, Salgado (2018) identified that 21% of the female adolescents would be abstainers.

Following an increasing order of problems, Cluster 2, related to the second pattern of conduct identified, brought together 30% of the male adolescents from public schools (mean age = 14.9) and 13% from private schools (age = 14.5). Considering

Table 10.1 Summary of patterns of criminal conduct observed in the Group of Studies and Research on Development and Psychosocial Intervention

	Cluster 1			Cluster 2			Cluster 3			Cluster 4			Cluster 5		
	Public	Private	Girls	Public	Private	Girls	Public	Private	Girls	Public	Private	Girls	Public	Private	Girls
Prevalence (%)	23	44	21	30	13	–	22	20	58	17	11	20	8	11	2
Prevalence among the offenders (%)	0	–	–	20	–	–	13	–	–	23	–	–	43	–	–
Percentage in the total offenses (%)	0	0	0	1	1	–	6	3	10	17	13	56	76	83	33
Age	14.7	13.5	13.3	14.9	14.5	–	14.7	13.7	14.7	15.7	15.1	15.2	15.8	14.3	14.8
Age at onset (offending)	–	–	–	12.5	12.7%	–	11.0	9.1	8.2	10.1	12.9	11.6	9.1	9.4	10.8
Type of offenses	–			Damage, theft, drug trafficking		–	Damage, theft, fights			Damage, theft, drug trafficking, carrying firearms and robbery (most common among male adolescents from public schools)			All types of criminal conduct[a] (for girls, except robbery)		
Alcohol (%)	32	35	2	62	60	–	73	52	74	95	71	97	92	94	85
Cannabis (%)	0	8	0.4	19	19	–	22	13	5	41	17	36	94	44	50

[a]Fraud, cybercrime, homicide, and sexual offenses were not investigated

the female gender, we did not identify any group with a similar offending pattern. These young people would commit one to three crimes during adolescence, the first being around the age of 12.5 years. Based on self-reported information, the crimes in this group would represent 1% of the total committed by all young individuals, the majority being of low severity, such as damage and theft of low-value goods in stores. Among the male offenders, approximately 20% had a pattern of conduct compatible with this group—low frequency and severity. These adolescents would have been arrested, for the most part, because of drug trafficking. In general, they do not have problems with substance abuse, although approximately one in five would use alcohol and, sometimes, marijuana. The absence of relevant problems associated with their conduct suggests that, for these young people, offending consists of an occasional/exploratory or circumstantial activity, specific to the age and, perhaps, related to particular characteristics of the context. It is noteworthy that 20% of the adolescent offenders present this pattern of conduct and, even so, they have been subjected to judicial sanctions advocated in the Brazilian law (probation or detention) in the same way as adolescents presenting a substantially more problematic pattern of criminal conduct (such as those described below).

Cluster 3, which consisted of 22% of the adolescents in public schools (age = 14.7 years) and 20% of those in private schools (age = 13.7 years), brought together young people whose most frequent deviant behaviors would be fights, damage, and theft in commercial establishments. This pattern of criminal conduct would be the most prevalent among women—approximately 58%. Young people with this pattern would be responsible for 3–10% of all reported crimes, with age at onset being around 10 years old. Despite the higher frequency of crimes, compared with Cluster 2, young people with this pattern of conduct would be less represented in the juvenile justice system—only approximately 13%. Two factors may explain this. The first would be that drug trafficking was more prevalent in Cluster 2. The drug policy would impose greater surveillance of this conduct. Indeed, national statistics (National Council of Justice, 2020) show that the main crimes for which young people are arrested are trafficking and robbery. The second explanatory hypothesis is related to the representativeness of this pattern of conduct at different socioeconomic levels. Proportionally, there are more adolescents from private than from public schools, compared with Cluster 2. Among the adolescent offenders, no adolescent from private schools was identified, showing that the chances of a teenager from a public school being judicialized are substantially greater than those of an adolescent from a private school—despite the number of crimes that they may commit. This proposal also refers to the practices of the control agencies, which tend to watch more young people from the most disadvantaged classes. Concerning substance use, important differences were also identified between socioeconomic levels and gender. Adolescents from public schools who had this pattern of conduct rarely use substances, whereas half of the adolescents from private schools use alcohol. The proportion is even higher among girls, with approximately 73% reporting alcohol use.

Cluster 4 refers to a pattern of conduct presented by 17% of the adolescents from public schools, 11% from private schools, and 20% of the female adolescents. These

young individuals would be responsible for 13–17% of the crimes revealed in the male samples and 56% in the female sample. Among the adolescent offenders, this pattern was observed in approximately 25% of the teenagers. Proportionally, the frequency of offenses in this pattern is substantially higher than those described in the previous patterns, and more diversified. Regarding the socioeconomic levels, adolescents from public schools are more likely to practice drug trafficking, violent crimes, and possession of a firearm than those from private schools. The proportion of female adolescents who engage in trafficking (6%) is higher than that of male adolescents from private schools (3%) and lower than that of male adolescents from public schools (22%). Regarding substance use, there are no significant differences: almost everyone has already used alcohol, and many have tried marijuana, but do not consume them regularly. Adolescent offenders with this pattern of conduct would differentiate themselves from those non-offenders because they regularly consume substances, especially marijuana—and possibly other substances too—alcohol, tobacco, and illicit drugs besides marijuana (Komatsu et al., in press).

Finally, Cluster 5 refers to the most serious pattern of conduct. Among the adolescents from this population, this pattern was identified in 8% from public schools; 11% from private schools; and 2% of the female adolescents. Although the prevalence of this pattern is lower than those previously presented, it would be associated with a large number of self-reported crimes: between 76 and 83% among boys, and 33% among girls. Of the offenders, 44% would present this pattern. Male adolescents would commit a wide variety of crimes: damage, theft, drug trafficking, robbery, bodily injury with the use of instruments, and possession of a firearm. Female adolescents would not commit the crime of theft. In other words, theft would be an offense exclusive to men, in this Cluster 5. Regarding substance use, most would have already used alcohol and would regularly use marijuana. A small percentage (5%) would stand out for the problematic use of several legal and illegal substances (Komatsu et al., 2020). In the sample of adolescent offenders, problematic use would be more prevalent: 37% would abuse and 15% would meet dependence criteria (Komatsu et al., in press). In the longitudinal study with judicialized adolescents who presented this pattern (Komatsu, 2019), it was observed that adolescents who identified as violent in the second half of adolescence (64%) remained violent in late adolescence and early adulthood. Table 10.1 summarizes the patterns of deviant/criminal conduct in GEPDIP research studies.

Studies Concerning the Social Regulation of Adolescent Behavior

The findings denote the heterogeneity of deviant/criminal patterns and the importance of making efforts to prevent the development of conduct concerning the patterns described in Clusters 4 and 5. In this sense, relying on the PSCT, and more specifically on middle-range theories related to the control of young people's

conduct by proximal processes, linked to the variables family, school, and peer group microsystems, we sought to identify significant differences between the clusters.

The Family Microsystem

Regarding the family, although there are countless research studies around the world, the theme remains current and relevant, either because the family is still an important instance of socialization, or because it is an institution in transformation, given the sociological changes that have greatly affected its configuration and functioning in contemporary times (Nascimento, 2019). In one of the first studies carried out, focusing on the family (Dib, 2012; Dib et al., in press), data were sought from MAOs and male non-offenders (MANOs; with the same socioeconomic background). We studied 68 male adolescents, aged between 13 and 18 years (mean age of M = 16), 32 in the MANO group, and 36 in the MAO group. Practically 100% of the adolescents belonged to families where the parent(s) was/were the biological one(s). Only one in the MANO group reported that he was adopted. All adolescents answered the Portuguese version of the Family Scale from the *Measuring Adolescent Social and Personal Adaptation (MASPAQ)* (Le Blanc, 2003), which is based on the PSCT.

In the family microsystem, the variables favored by the PSCT refer to six dimensions: socioeconomic level; family configuration; conjugality; models in the family; family bonds; family constraints. Briefly, socioeconomic level and family configuration refer to objective conditions, which can yield stress and have an impact on family relationships and functioning; conjugality concerns the quality of the relationship between the parental couple; and models refers to the attitudes and behaviors presented by the adult members of the family, these dimensions being the context of family relationships and functioning. At the center of the system are the control mechanisms: family bonds and family constraints. The first refers to the attachment between the adolescents and their family members and the investment in shared activities. The second refers to the limits and possibilities set for the teenager, considering family values and norms, operationalized through parenting practices, which may or may not be appropriate (abusive or negligent).

The results showed no significant differences in family configuration and conjugality. It is worth mentioning that the indicators in these two dimensions denoted equivalent levels of problems, and not exactly the absence of problems. Significant differences were observed in four of the six dimensions of the family system. At the socioeconomic level, although efforts were made to pair the samples, recruiting young people in the same communities, families of MAOs lived in more difficult material conditions—a more marked occupational disadvantage for adults/guardians and economic dependence (in terms of the need for welfare benefits). In families of MAOs, there would also be more antisocial models, usually older brothers. Regarding the proximal regulation mechanisms, there were differences in family

bonds, specifically in the attachment domain, with less affective identification of adolescents with parents/guardians among the MAOs, with them showing less consideration for the feelings and expectations of the parents/guardians and, in family constraints, with adolescents in the MAO group indicating more flawed parental supervision, as well as less parental reactivity in front of their negative/inappropriate behaviors (which includes crimes).

From a gender perspective, subsequent studies sought to verify the significant differences in the scope of family relationships between female adolescent offenders (FAOs) and MAOs, considering citations in the literature on the weight of problems in intimate relationships, especially in the family, for female juvenile delinquency (Janssen et al., 2017). From this perspective, one of the studies (Ribas-Pereira, 2019) focused on the specific variables of family bond and family constraints, collecting data from 30 individuals in the FAO group and 20 in the MAO group, through the application of validated instruments for the Brazilian reality—the Family Adaptability and Cohesion Evaluation Scale—FACES IV (Olson, 2011); the Parenting Styles Inventory—PSI (Gomide, 2006); and the Child Trauma Questionnaire—CTQ (Bernstein et al., 2003). For the general sample, the results showed problems at significant levels for a high proportion: 42% would live in families characterized as "unhealthy" (category according to FACES IV) and parental educative style classified as "at-risk" (inconsistent, abusive, and/or negligent)—60% maternal style; and 48% paternal style. In this context, one-third of the sample revealed that they had been subjected to moderate or severe levels of emotional and physical abuse, as well as emotional neglect. When comparing FAOs and MAOs, significant differences were observed, with the indicators in the FAO group being worse in the following variables: paternal educative style/"at-risk", emotional abuse, sexual abuse, and physical abuse. In summary, the study corroborated the existence of problems in the bonding and parenting practices in a high proportion of the adolescent offenders. Problems related to constraints, including specific forms of abuse, were more prevalent in female adolescents.

Another study was carried out from a gender perspective, focusing on differences between FAOs and MAOs, concerning the self-reported experience of mistreatment (abuse and neglect). We analyzed data collected from 20 adolescents in the FAO group, and 20 in the MAO group, obtained through the application of the Brazilian version of the CTQ (Grassi-Oliveira et al., 2006). All the young individuals showed significant criminal engagement. The pattern of conduct between FAOs and MAOs was different only in frequency—the girls reported fewer crimes. A high proportion of the total sample reported mistreatment at moderate and severe levels (emotional abuse, 35%; physical abuse, 32.5%; emotional neglect, 22.5%; physical neglect, 20%; sexual abuse, 12%). The female adolescents reported significantly more emotional and sexual abuse, reiterating the previous findings. In summary, although relational issues within the family have shown themselves to be relevant to the adolescents studied, in general, females would experience more problems with their father figure and more victimization, specifically sexual and emotional abuse, denoting gender aspects, in the composition of the vulnerabilities associated with female juvenile delinquency.

The School Microsystem

It is important to emphasize the centrality of the school microsystem in the regulation of conduct. It is in this institution that social norms are imposed concretely on children and adolescents, in their developmental path, providing adaptive challenges and learning, and shaping adolescent worldviews of justice (Sabatine et al., 2017; Thomas et al., 2021). In the 1990s, Le Blanc (1994) demonstrated that school variables overlapped those of the family in the official explanation and those given by the adolescents themselves for their involvement in the lawbreaking activity. He analyzed empirical studies to verify that the persistent practice of crimes in adolescence was first associated with variables related to school and, later, to family. In general, the school experience of adolescents who engage in crimes would be negative: they would feel stressed at school, would have relationship problems, would perform poorly, and would be repeatedly sanctioned by school authorities (Bae, 2020; Theimann, 2016). In contrast, a strong school bond would function as a robust protective factor (Sabatine et al., 2017).

In the model inherent to the PSCT, the "in and by the school" control of conduct, three main and interdependent mechanisms are articulated: School performance, school bond, and school constraints. These operate under the conditions established by the "schooling history" (existence or not of age-grade delays/lag), the "schooling of parents/guardians," and "school stress" (Le Blanc, 2003). School performance (as measured by academic results) occupies a prominent position in the system; it is a kind of pivot of school regulation. When high, it favors the adolescent's investment in academic activities (classes and tasks/work), motivates participation in the school activities, and favors discipline.

School bond comprises three components: "attachment to teachers," "investment in education," and "commitment to education." In summary, "attachment" is based on the student's affective identification with the teachers, the feeling of being helped in the case of difficulties related to school subjects. "Investment" corresponds to the time devoted to studies, together with the students' feeling of doing "their best" at school. The level of investment in school activities is reinforced by good academic performance and attachment to teachers. As for "commitment," this represents the obligation that the students establish for themselves concerning schooling. Commitment is negatively related to evasion. It is necessary to consider that "commitment" depends on the students' perception of their school skills (feeling of self-efficacy). The components of the school bond comprise a subsystem of the larger system of school regulation (Le Blanc, 2003).

School constraints refer to "rules" and "sanctions applied by school authorities" through behavior that is considered inappropriate, as well as "students" monitoring by parents/guardians. School constraints also involve an internalized dimension as measured by indicators related to "legitimacy of school rules by the adolescent." In general, the more consolidated the "internal constraints," the less necessary the "external constraints." On the other hand, too many "external constraints" promote

a process of "school maladaptation" and weakens the legitimacy of school rules (Le Blanc, 1996a, b, 2006).

In one of the studies carried out, 60 male adolescents aged 14–18 years (mean age of M = 16.6) were subdivided into four groups, each one composed of 15 participants: adolescent offenders who dropped out of school (MAO-Ds); adolescent offenders who did not drop out (MAO-NDs); adolescent non-offenders who dropped out (MANO-Ds); and adolescent non-offenders who did not drop out (MANO-NDs). The adolescents were paired regarding their socioeconomic level and all had attended the same type of educational institution (public schools). The time away from school for the dropout groups was 2.07 years in MAO-Ds, and 1.93 years in MANO-Ds. The data were collected using the Portuguese version of the School scale, from *MASPAQ* (Le Blanc, 2003), which is based on the PSCT. In the first place, the scores obtained allow us to state that all the adolescents would be vulnerable to the schooling process, considering the regulation conditions: parents/guardians with a low level of schooling and significant school delays. However, when comparing the groups, adolescents in MAO-D would have the worst indicators of school regulation, except for stress, which would be higher in MAO-ND, perhaps because they were still studying (da Silva and Bazon, 2018). In a more detailed analysis (Silva et al., 2016), it was learned that the most striking differences between the groups were in:

1. School performance and school bond, distinguishing drop-out from nondrop-out youth.
2. School constraints, distinguishing between the judicialized and the nonjudicialized, regardless of whether they dropped out or not. In other words, we concluded that school dropout in adolescence, a phenomenon with a high prevalence in the Brazilian reality (Brazilian Institute for Geography and Statistics, 2019), would be more frequently related to failed processes in terms of learning and academic success, as well as in relationships, in school, whereas delinquency would be more frequently related to the history of school punitions/sanctions. Thus, the punitive and sanctioning school practices, aimed at adjusting a student's behavior to the school environment, risk generating an escalation of social maladjustment, especially among those who are socially vulnerable and present low performance and low school bonding, perhaps because of the effects of sanctions, such as the rejection of these adolescents by teachers and conventional peers, as well as by the teenagers themselves, and the rejection of school rules owing to the negative emotions linked to the experience of punishment—the feeling of inadequacy and anger.

Farther, the processes according to which the school trajectory of adolescent offenders develops has become the object of qualitative studies, considering the objective of obtaining elements of the subjectivity of these individuals, concerning school experience. In one of the studies, data were collected from six judicialized adolescents and their respective guardians, through semi-structured interviews aimed at obtaining narratives about the school path and schooling history. Also, documentary information was collected in 22 educational institutions that had been attended by

young people since the beginning of their school life. It is worth noting the fact that everyone was in a school grade incompatible with that expected for their ages, showing a significant academic lag (4 years late on average), and that they had attended a high number of educational institutions, denoting frequent school changes, that is, a very "bumpy" school path (adolescent 1 had attended four schools since the beginning of his school path; adolescent 2 had attended five different schools; adolescent 3 had attended seven schools; adolescent 4 had attended eight schools; and adolescent 5 had attended ten schools). One teenager had attended only a single school.

In addition, the qualitative analysis of the interviews highlights the existence of two types of trajectories: one marked by discontinuity and the other by continuity in the quality of school experiences. The discontinuous trajectory was characterized by a positive initial period, which subsequently becomes negative. The initial experiences that were meant to be positive referred to memories of good interpersonal relationships with teachers and peers. The experience would have turned to negative as the expectations of learning and behavioral adequacy were becoming clearer, and proved to be difficult to achieve, together with the deterioration in the quality of the relationship with teachers. Evasion in this type of trajectory was even precocious and was associated with the formalization of "school failure," in terms of performance in school tests.

Some statements express how the experience was meant in this trajectory:

> *[I used to like] The teachers, the classmates… everything! [how was it?] Cool… I played soccer, I played checkers, I played volleyball, I listened to music, that's right.* (Renan).

> *She [the teacher] said: 'No! You can do it… Go there and do it [the task]… but I couldn't.* (Renan).

> *Ah, there were some who cursed the teacher, the teacher cursed the student. He talked about slapping, hitting a chair, those things, hitting an eraser… The teachers, in class. Then some started talking loudly, then they talked… [So, how did the students react?] They kept calm. But then, in their minds, they thought about beating the teacher… to beat up… Only in their minds. In reality, they didn't beat anyone.* (Renan).

In the second type of school trajectory, the experience is seen as predominantly negative from the beginning. In this path, the adolescent's memories referred to the teachers' view as extremely "uncommitted" and to a chaotic school environment. In this context, his relationship with teachers is perceived as one of rivalry. The "school failure" referred to by the adolescents was attributed to the school system and not to themselves (Bazon et al., 2013). Some statements express the subjectivity related to this trajectory:

> *… I never liked school, ma'am … I didn't want to know about school, not studying, no ma'am… wanted to be on the street.* (Willian).

> *No teacher was patient with me… I didn't like anyone, no! They were in theirs and I was in mine… I never liked talking to a teacher, a staff member, a jailer, no! A lot of arrogance, right? As always, right? A lot of arrogance! (…) She [the teacher] spoke like that, if I got*

up from the chair she would hit me, the teacher said… then I got up! I said: 'I'm going to see what will happen, then I got up…' (Willian).

At school? Oh my gosh, I learned a lot of bad things, huh? I think it was through school that I entered the life of crime… (Willian).

…I got high, right? And they [teachers] thought it was on purpose, so they got mad! (Willian).

In a subsequent study, with a similar design, we sought to verify whether the two types of trajectories would reproduce with data from a new sample of adolescent offenders (n = 12). The results obtained reiterated the trajectories described: one discontinued—from the initial positive experience to the negative one; another continuous—a predominantly negative school experience from the beginning, although, for some, it was punctuated by positive experiences (specifically for those who were still studying during the research period, these being, above all, related to the perception of certain self-efficacy) (Franco & Bazon, 2019).

… that school was not so good. There was some kind of teachers, oh my gosh, they didn't even pay any attention to the students […] And the school is very bad, it looks like a prison, with bars everywhere… even the doors had bars […] I already lived in a prison environment there (…) (Kaique).

[The teachers] also said that I was no good, that I was making a mess. At the break, they said not to play with me… they spoke, this teacher that I didn't like, he said: 'This brat is useless, I don't know what kind of problem he has…', 'Don't keep him!' They used to talk like that. (Kaique).

Then, in second grade, too, I went and won an award there […] as the best student… [after a while]… if it was better for me, this school, then I think I hadn't even done these wrong things, because I would have already learned, I wouldn't have any difficulty… (Kaique).

The Microsystem Constituted by the Interactions Between Pairs

In parallel with the studies on family and school, another investigated microsystem, according to the PSCT, was the one constituted by the group of peers (friends and colleagues). In adolescence, there is greater openness to the influences of social groups other than the family and, within this, the adolescent's relationship with peers is highlighted, either as a protective factor or as a risk factor. According to Haynie and Osgood (2005), in this phase, more than any other, a lot of time is spent with friends and colleagues, and a lot of importance is given to them, which justifies the investment in research on their influence on behavior.

According to the PSCT, conduct regulation by friends and colleagues occurs through the interaction of variables in five dimensions: context of relations; commitment; attachment; investing time with them; and type of affiliation. According to the Theory, the network of peers, its breadth, constitutes the context in which

attachment, investment, and commitment may or may not flourish, constituting the Social Bond in this plan. Commitment (built on the feeling of loyalty, as well as efforts to exercise the leadership role in one's group) is an attitude that gives weight to the values conveyed by peers (sometimes to the detriment of those conveyed by parents/guardians and other authority figures). Attachment (based on communication and trust) is a source of commitment toward peers, and these two dimensions—attachment and commitment—feedback and compete for more investment in the relationship with peers (regarding time devoted to shared activities). The impact of the dynamics between these dimensions would be mediated by the nature of the affiliations (referring to the type of peer frequented by the adolescent—conventional or unconventional). Nature concerns the model they offer and the pressures they exert on the young person's social orientation. If the teenager is mostly attached to conventional figures, regulation will promote conventional behavior; on the contrary, if affiliations are mostly to antisocial figures, regulation will provide deviant behavior (Le Blanc, 2003, 2004).

In a study (Bazon & Estevão, 2012), 75 male adolescents were investigated: 32 MAOs and 43 MANOs. We worked with data collected through the application of the Portuguese version of the Peer Scale, of MASPAQ (Le Blanc, 2003), which is based on the PSCT. In comparison, the significant differences were not as consistent with what was expected. According to the Theory, the judicialized individuals should belong to a wider network and present greater commitment and investment in peers, in addition to more pronounced leadership. These characteristics, however, were more significant in adolescents in the MANO group. Adolescents in the MAO group would be connected to smaller networks, composed in the same way as in MANO of offenders and non-offenders. They would even spend less time in joint activities and maintain poorer relationships among them—marked by lower commitment and attachment. However, in line with the theoretical proposal, in the MAO group, the adolescents would feel more pressured/embarrassed by their peers, even for committing crimes. In addition, another important source of data differentiated MAOs from MANOs: significantly more frequently, the judicialized reported having older friends/adults with a criminal history. The picture that emerges from the set of information shows, therefore, that the young individuals in the MAO group would maintain friendships of lesser quality, perhaps experiencing, in this plane, certain socio-emotional isolation. In parallel, they would be in contact with older criminalized individuals/adults who, owing to the asymmetry, would be in a position to exert great influence on their conduct.

Larger Sample Studies: Corroborating Data from Previous Studies

The data from all these partial studies were largely corroborated by the results of a larger study, carried out with 260 adolescents in the MAO group and with 260 in the MANO group, all male, using a more sophisticated analysis method (Galinari et al., 2019). The adolescents offered answers to the Youth Behavior Questionnaire

(*Questionário de Comportamentos Juvenis*, QCJ), adapted for Brazil from the instrument used in the Observatory on Youth Delinquency in Portugal (Castro et al., 2010). Among other relevant information, this instrument investigates the main variables recommended in the PSCT. It is worth saying that, preliminarily, MAOs and MANOs were characterized in terms of the patterns of criminal conduct, from data of "self-reported delinquency," in order to verify their representativeness, as they had been formed only by the criterion of being at the juvenile justice system. The analyses showed that adolescents in the MAO group would effectively present distinctive delinquency, referring to the most frequent, diverse and violent criminal conduct.

Subsequently, logistic regression analyses were performed and in the adjusted model, the variables related to the PSCT that were relevant were as follows: Socioeconomic level; parental supervision; school performance; peers. In fact, it was observed that the lower the socioeconomic level of the adolescents' family, the more likely they are to belong to the MAO group. The same was true for parental supervision and school performance. The novelty here was the fact that the "offending peers" variable (regarding the type of affiliation) also proved to be significant, perhaps because the sample was larger. Furthermore, in the adjusted model, a variable acted to reduce the chances of the adolescent belonging to the MAO group: Family Investment. Although this variable does not distinguish the groups investigated in the first study (Dib et al., in press), in this one, with a larger sample, the time spent by family members in joint activities was relevant as a protective factor.

Following the PSCT framework, apart from the socioeconomic level, the other constructs that proved to be relevant imply contextual variables, which refer to relational, dynamic processes. The economic level, in turn, related to structural aspects—employability/work and income of adults in the family, in general, related to their schooling—would more properly refer to the conditions in which the mechanisms that generate the processes operate, and would not be determinants per se (Le Blanc, 2010). This perspective, valid for the context of the origin of the Theory, had already encouraged the research group to increase the research studies in this sense, as the studies in the Brazilian socio-cultural context indicated a more important role of this variable, discriminating between groups of judicialized and nonjudicialized adolescents. Thus, a specific study, with a sample of adolescent students only from private schools (n = 324) was implemented and offered new elements (Visioli, 2017).

It is important to underline that, in Brazil, the students' socioeconomic profile is the main difference in the population served by the two types of school (Brandão and de Carvalho, 2015). Thus, in the study (Visioli, 2017), the sample was composed of more than 95% young individuals from families belonging to the highest social strata, thus discarding the bias that could be generated by conditions linked to disadvantaged socioeconomic levels. These young people also answered the QCJ. As already mentioned, five groups were identified, in terms of patterns of conduct, all of which are equivalent in socioeconomic level. The two groups characterized by greater criminal engagement (Clusters 4 and 5) differed from the others

in the attachment to parents/guardians, in school bonding—involving attachment to teachers—and in peers, always with scores indicating more problems in these fields. Thus, regardless of the material conditions associated with the socioeconomic level, adolescents with more serious crime patterns presented significantly more problems in the family, school, and friends/colleagues microsystems, reiterating the PSCT. Therefore, considering the designs of the studies carried out, socioeconomic level seemed to have more association with vulnerability to be arrested/judicialized than with delinquency itself, as it was relevant only when the samples studied involved different groups according to that criterion (judicialized or not).

Inquiries related to gender also encouraged the proposal of the specific study already mentioned (Salgado, 2018). We studied a large sample of girls (n = 1120), aged between 12 and 18 years and from public and private schools, who answered the QCJ and CTQ instruments. In this study, four clusters were identified, as already mentioned: two with no or almost no engagement in antisocial activities; and two others with significant antisocial engagement. These clusters differed in almost all the variables we tested, denoting that the adolescents in Clusters 3 and 4 would be differentially exposed to a specific set of risk factors. Regarding the family, attachment is highlighted, one of the components of the bond to the social institution. The scores in this variable discriminated between all the clusters. The adolescents in Cluster 4 had the lowest scores and, also, the highest scores in conflicts in the family, showing relational weaknesses and communication problems as aspects relevant to female juvenile delinquency. Added to this, in the results related to victimization, Clusters 3 and 4 differed significantly, with reports of more victimization/mistreatment, again denoting the weight of these experiences in female juvenile delinquency. Emotional neglect was most frequently reported, followed by emotional abuse, overestimating the types of psychological/emotional abuse for this gender.

Concerning school, the clusters also differed in attachment, regarding the quality of the adolescent's relationship with teachers, and in school values, that is, in school commitment, regarding positive attitudes toward schooling. The lowest mean index of school attachment was obtained in Cluster 4 and the lowest indexes of school values in Clusters 3 and 4, denoting more fragile school attachment in the most problematic groups. Concerning relationships with peers of the same age, the mean scores in antisocial peers strongly discriminated all groups, indicating that deviant influences would be all the more present the greater the adolescents' engagement in antisocial behaviors.

It is important to underline that, despite the representativeness of the sample in terms of socioeconomic level, this variable was not relevant in the discrimination of the female clusters, reiterating the results found for the male gender, when we control the possible bias caused by the criterion of "judicialization." For the female gender, the variables that seem more relevant to the processes that foster deviant behaviors have more to do with tensions in their close relationships (Borduin & Ronis, 2012). The results bring to light gender issues as they denote the weight of conflicts in terms of intimate relationships, which may be related to different aspects of socialization based on gender expectations (Broidy & Agnew, 1997).

Final Considerations

In the scenario of criminal violence that plagues Latin America in general and Brazil in particular, young people have played a role that stands out more precisely for the high level of victimization that affects them. As regards offenders, the studies carried out at the GEPDIP highlight the fact that only a small group is significantly engaged in criminal activities, presenting distinctive delinquency, which is characterized by the manifestation of criminal conduct with high frequency and diversity. This pattern was present in different samples, regardless of socioeconomic status. The fact of belonging to the socially less favored strata proved to be a relevant variable to judicialization, denoting the fact that formal social controls—police and justice—focus more on socioeconomically vulnerable groups.

The proximal variables—in the microsystems of the family, school, and peers—that would better explain engagement in offenses refer to the social bond, the models, and the forms of constraints to which young people are subjected. Considering the differences related to the gender of the young individuals, the history of victimization for female individuals stands out, revealing greater vulnerability related to gender. Future research should pay attention to the heterogeneity of the phenomenon, specifically on how each individual or group of individuals experiences and responds to stressful effects from their contexts, with special attention given to gender differences and the impact of these experiences on the mental health of young people.

Although most Latin American children and adolescents grow up in unfavorable contexts, the capacity of most young people to overcome adversity and to adapt relatively well to social demands and possibilities is remarkable. Nevertheless, the extent to which violence affects youth is worrying. In its most diverse forms, violence remains an obstacle for the full development of young individuals in Latin America, especially those from the most vulnerable social and economic strata. The adverse context in which many children and adolescents grow up, socialize, and develop frequently leads to victimization, and/or the perpetration of violence. As the manifestation of violence can vary significantly between countries, cities, and communities/neighborhoods, there is no single, specific prevention strategy that works for all situations (Alvarado & Muggah, 2018). However, there are general considerations and guidelines to direct violence prevention policies and programs.

Preventing violence in general certainly requires macro-social policies that promote income distribution, access to quality education, and gender equality. Also, selective and indicated prevention requires specialized programs that focus on the relevant variables in the proximal contexts of socialization. An effective prevention strategy must involve all levels of influence—social, cultural, community, school, and family—and promote the strengthening of social bonds. At the individual level, it is important to involve young people in meaningful activities that foster a sense of self-efficacy as well as social responsibility, focusing on protective factors and on building resilience.

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Chapter 11
Emotional Psychological Impact of Institutionalization on Children and Early Adolescents

María del Carmen Manzo Chávez

Introduction

The index of institutionalized children and adolescents has increased significantly year after year at the international level. According to recent reports from the United Nations Children's Fund (UNICEF, 2020), around 187,129 children live in residential institutions in Latin America and the Caribbean, fewer than the 240,000 previously reported (Palummo, 2013); however, it remains a problem with variability and increases differentially from one country to another, with implications for the mental health of these children and adolescents. The country with the most institutionalized children was Haiti with 50,000 registered children and the country with the fewest institutionalized children was Saint Lucia with 40 children. Regarding child protection and/or care institutions in 2012, Argentina had a registry of 1669, making it the country with the highest number of institutions in the Latin American and Caribbean region, for its part, Granada only had five registered institutions, being the country with the fewest institutions in the same region (Palummo, 2013).

In the case of Mexico, in 2013, a total of 28,107 children were reported to be in foster care institutions (Palummo, 2013). However, the data provided by the National Institute of Statistics and Geography (INEGI, 2016), the official organ of the Mexican Government, differ from the previous data and mentions an institutionalization index of 17,522 children for 2012 and for 2013, the index amounted to 25,700 children, so that in 1 year 8178 infants were institutionalized. It is worth mentioning that the discrepancy in terms of the figures reported by these

M. Manzo Chávez (✉)
Postgraduate Studies Division, Faculty of Psychology, Universidad Michoacana de San Nicolás de Hidalgo/Michoacan University of San Nicolás of Hidalgo, Morelia, Michoacan, Mexico

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organizations reveals what was stated by UNICEF (2020), that the State and the institutions do not have a precise registration system for children in this situation.

Regarding the registry of child protection and/or care institutions, in 2013 in Mexico there were 879 institutions, the States of Baja California Norte and Sur having the most institutions, with 443 registries, followed by Mexico City with 425, and the state with the fewest institutions was Tabasco with 22 and in the case of Michoacán, there were 171 host institutions (INEGI, 2016).

This index in the Latin American and Caribbean Region, as in Mexico, reveals a significant number of institutionalized children, which has led researchers to study the phenomenon of institutionalization.

Institutionalization is considered a protection measure for children and adolescents when their personal integrity is at risk, as they are in the protection of the State in orphanages. The causes of institutionalization are multiple, mainly intra-family violence, abuse, and the impossibility of providing basic care, not to mention abandonment and orphanhood, although the latter is present in a minimal proportion, unlike past decades, when they were the main reason for admission.

In addition to these causes, in Mexico and other countries where insecurity prevails, children are indirect victims of organized crime; thus, their parents or guardians resort to the institutionalization of the child as an alternative for protection.

Research in Latin America and Mexico indicates that the separation of parents, the reason for admission, the age at admission, the experience of a previous life with their family, and the institution have repercussions on physical, psychological, social, and educational levels, which can be short term and long term. On a psychological and emotional level, there are difficulties in the cognitive, sexual, social, and educational areas; in addition to an excess of pathologization and medication in these children (Da Cunha & Barreyro, 2015; Deambrosio et al., 2018; Fernández-Daza & Fernández-Parra, 2012; Manzo, 2020; Moretti & Torrecilla, 2019; Saurina, 2015).

In this chapter, we look at the psychological and emotional impact of institutionalization on children. For this, basic concepts of institutionalization are presented in the conceptual framework, and on the other hand, allusion is made to the findings of research carried out in Latin America and Mexico, subsequently presenting the results of the latest research carried out by the author in the latter country, concluding with the final and prospective considerations on the subject.

Nature of Institutionalization

Institutionalization is considered as the "internment of a child in a protection institution, which implies separation in the family, which must be motivated according to the law" (Palummo, 2013, p. 41). Institutionalization, also known as institutional care, occurs when there is a violation of a child's rights and/or is at social risk, it is considered "a measure of protection for the minor against orphans, abandonment or situations in which their integrity is put at risk, remaining in the custody of the State,

who provides the necessary care through the family homes" (Manzo & García, 2018, p. 4). Depending on the country, the term "institutionalization" has other names, such as foster care, institutional care, placement in a caring entity, shelter measures, protection homes, etc. However, its purpose does not change: to offer the child different alternatives of action in terms of protection when he/she is in a risky situation.

Brief History and Types of Institutional Care

The institutions in charge of housing and caring for unprotected children have existed for several centuries, through orphanages run by religious congregations and fostering of the orphan. Since the first century in Europe these institutions linked to religious precepts such as the Jewish Law that stipulates the care of the widow and the orphan, in the case of Catholics, this mission was entrusted to Bishops and Monasteries, based on the principal charity (Dozier et al., 2012). In 1410 the Imperial College of Orphan Children was founded in Valencia, Spain, by San Vicente Ferrer, which is considered one of the first orphanages (Imperial College of Orphan Children San Vicente Ferrer, s.f.).

At the time of the Reformation, the Laws of the Poor Elizabethans attributed responsibility for the care of orphans to individual parishes. In the sixteenth century, orphanages appeared almost all over Europe, but it was not until the eighteenth century that there was a considerable increase, as a consequence of the increase in the number of orphans abandoned as a result of the war, epidemics, economic difficulties, and food shortages (Dozier et al., 2012). It is worth mentioning that the orphanages reached the colonies of the Americas through religious congregations, establishing themselves since that time, New Spain (Mexico) being the exception.

In Mexico, the history of child protection institutions does not differ from that of the other countries of the Americas; however, in 1915 institutionalization took a turn, as the number of orphaned or abandoned children increased owing to the War of the Revolution, hunger, poverty, and disease, which forced the foundation of other institutions now in charge of public welfare, many of them in the hands of lay people (Molina, 2018). For this reason, the State saw the necessity to standardize the institutions, whether run by religious or lay people, in order for them to operate in a similar manner, with the first attempt to regulate foster homes in 1920, when the Juvenile Protection Boards (JPM) and Juvenile Guardianship Courts (TTM) were concerned about the care and protection of children who lacked a family; in a second moment, in the 1960s, the consolidation of the normativity of the family homes was achieved, characterized by having stricter rules for the institutions, in addition to the fact that the actions of the protection of minors were systematized owing to an increase in abuse and child abandonment (Misitu et al., 2010, as cited in Manzo & Rodríguez, 2018).

In recent years, child protection has been extended to all children in situations of vulnerability and risk and no longer only focus on the orphan or the abandoned,

which has led to the generation of strategies and laws implemented by the State, focused on protection, guardianship, and assistance (Di Lorio & Seidman, 2012). The institution as such has evolved, as not only traditional orphanages exist, but several other types of institutions have emerged. In this regard, in Mexico, there are two types of child protection institutions: those that are exclusively for children in vulnerable situations and those that provide care for juvenile offenders (Romero-Garza, 2014). Regarding the former, these can be temporary shelters, nurseries, family homes, and boarding schools and they will be alluded to in this work. It is worth mentioning that all host institutions are in the hands of the State, which regulates and supervises them.

The judgment for admission to one of these types of institutions is age; children from 0 to 6 years old live in a nursery, children from 6 to 15 years old live in a foster home, and adolescents from 15 to 18 years old live in a youth home. The stay in the institution is up to 18 years of age when they reach the age of majority and are inserted into society (Law for the Protection of the Rights of Girls, Boys, and Adolescents, 2010, as cited in Manzo & Rodríguez, 2018). However, there are cases in which the stay in the institution is prolonged for a long time, because of a decision made either by the authorities (López et al., 2016) or by the adolescent, if they want support for the activities they are doing at that time, such as studies.

Now, these types of institutions operate under two models: the traditional and the family model of childcare. The traditional model is one in which the child lives with a variable number of companions, in a place with common spaces (bedroom and dining room) and they are cared for by caregivers. In the same institution they attend school and have medical services. In the family model of childcare or foster care model, the child lives in a community, made up of several houses, in which there is a fixed full-time caregiver assisted by a caregiver who can be rotating. In each house there is a maximum of 8 children who are not rotated, who attend school externally, and receive other care such as doctors externally too, trying to bring the institution a life that is as close as possible to that of the family (SOS Children's Villages, 2009). The traditional model governs the largest number of infant care institutions.

In Spain, Latin America, and the Caribbean, the institutions for the care of minors have different names, modalities and variants, such as orphanages, foster homes, psychiatric institutions, hospitals, and immigration centers; they can be public, private, mixed, temporary, or permanent. When it comes to institutionalization, it is generally excluded from this classification owing to its characteristics to youth criminal justice institutions and alternative family-type care modalities such as foster care and forms of informal care in family homes, which are other forms of protection and care of children (Palummo, 2013).

About the type of foster care provided by the institution, this can be of different types (Lafuente and Cantero, 2010; Gobierno de Castilla - La Mancha, n.d. Gobierno de Navarra, s.f.)

– Residential shelter, where the child is provided with a place of residence and coexistence where their needs for protection, education, and development are also covered to guarantee their personal development and social integration.

– Simple foster care, when the child's family reintegration is possible within a short time.
– Permanent foster care is foreseen for those cases in which adoption does not proceed and therefore, there is no return of the child to his family in the medium or long term.
– Pre-adoptive foster care: It is a form of temporary foster care, prior to the legalization of the adoption, that occurs between the family requesting adoption and the candidate for adoption, in order to guarantee the success of the same.

The first occurs within an institution and the rest can occur in the institution or in a foster home.

On the other hand, Lafuente and Cantero (2010) differentiate between foster care institutions according to the quality of care. They mention that poor-quality institutions are characterized by:

– The fluctuating presence of multiple caregivers
– Large and often highly influential groups
– Strict regulation and restriction of daily activities
– Lack of appropriate and varied cognitive stimulation and feedback
– Lack of privacy
– Generalized depersonalization of social institutions
– Possibility of neglect and abuse

Causes of Institutionalization

Some years ago, orphanhood or abandonment was the main cause of institutionalization; currently, it is only one of the reasons for admission, albeit the most frequent. Others include (Palummo, 2013):

(a) Living in poverty
(b) Having been a victim of violence, mistreatment, abuse, sexual abuse, exploitation, or trafficking
(c) Being in situations of risk, abandonment, family rejection, partial or total orphanhood, street situation
(d) Irregular migrant children, migrant children alone or separated from their families.
(e) Having suffered from natural and social disasters
(f) Presenting behaviors of children who violate the rights of other people
(g) Presenting drug abuse behaviors that require medical or psychiatric treatment
(h) Parents deprived of liberty or suffering from psychiatric conditions or other illnesses that make it impossible for them to care for children

It is important to mention that the causes of the institution are multiple, in addition to which they can be cumulative and not exclusive. Research on the subject by Da Cunha and Barreyro (2015) mentions that in Latin America the most frequent causes

of admission to institutions are abuse, threats, and violations of the rights of children or adolescents that constitute a risk to their development.

In Colombia, Durán and Valoyes (2009) identified orphans in situations due to sudden changes or emergency circumstances that led to the separation of parents, such as natural and social disasters, diseases, armed conflicts, displacement, economic exploitation, life on the streets, crime, prison, poverty, inequality, exclusion, and family disintegration as the causes of institutionalization in that country.

In Chile, the main causes of institutionalization have changed; in 1997 it was determined that family problems and poverty were the main reasons for admission; in 2010, it was neglect and abuse, and in 2014, neglect and sexual abuse were reported to be the number one cause of admissions to the institution (Herrera & Shae, 2016).

Pineda (2014) detected that, in Guatemala, the poverty, natural disasters, abuse, orphanhood, addictions, problems related to health and education, vulnerability and different capacities are the causes of institutionalization.

In Mexico, Romero-Garza (2014) and Manzo and García (2018), mention as reasons for institutionalization poverty, uprooting, family dysfunction, abuse, presence of situations such as addictions, imprisonment and/or physical or mental illnesses in parents, carelessness, and any circumstance that puts the physical, psychological, and/or social integrity of the child at risk. Likewise, many of the institutionalized children were victims of organized crime, whether the parents are in a criminal organization, or their family has been attacked, putting the child's life at risk; thus, their protection is sought through the institution. Regarding the admission to the institution, this can be given at the initiative of the parents themselves because of their living situation, or by the direct intervention of the State, when the child is at risk.

An important fact that should be mentioned is that the majority of institutionalized children have parents or extended families; thus, they are not candidates for adoption, which means that they will live in the family home until they come of age. Only those children who have been found to be orphans or abandoned and do not have an extended family are adoptable, or children whose parents have lost custody.

Consequences of Institutionalization for Child Development

The separation of the parents and the experience in the institution brings with it a series of consequences in several spheres of the child's life. Research in Spain, Latin America, and Mexico mention the following:

(a) Physical and motor development. The physical and motor development of the institutionalized child is affected in the following aspects:

- Physical development: these children tend to present alterations in their physical condition, low weight and height, problems with eating, and the incidence of organic disorders and a tendency toward diseases. Likewise,

they tend to have sensory deficits and alterations, such as deficits in sensory integration, specifically in touch, vision, and hearing (Lafuente & Cantero, 2010; Palummo, 2013). Saurina (2015), detected neurological and immunological alterations in these children.

- Motor development: It is slower and there may be a delay and/or motor alteration, such as, for example, stereotyped movements (Lafuente & Cantero, 2010).

(b) Cognitive development. The cognitive development of the institutionalized child is altered in the intellectual and language aspects in the following way:

- Intellectual development: Children show delay and impairments in their cognitive development, as well as difficulties in solving problems (Moreno et al., 2010; Palummo, 2013), delay in the formation of concepts, difficulties in logical reasoning and in the capacity for abstraction, memory deficits and delayed operational capacity, and low school performance in mathematics, reading, and drawing (Lafuente & Cantero, 2010).
- Language development: In their studies, Lafuente and Cantero (2010) detected delays in the development of language; it is affected at the expressive level (deficiencies in pronunciation, vocabulary, sentence structure, and use of a special jargon). Moreno et al. (2010) reported a scarce vocabulary, poor morphosyntactic development, difficulties in using language as a means of directing action and restricted use of language as a communication resource, and difficulties in the continuity of discourse.

(c) Psychological development. Lafuente & Cantero (2010) found that institutionalized children present high levels of stress, self-absorption, are self-centered, are not alert, do not respond to stimuli, show lack of motivation, have little ability to concentrate, and have no initiative. In addition to the fact that in many cases they establish an insecure type of attachment bond, generating later difficulties in interpersonal relationships (Herrera & Shae, 2016; Jimeno, 2015; Rojas, 2018).

Regarding the emotional aspects, Lafuente and Cantero (2010) mention that institutionalized children frequently present negative feelings such as a feeling of not being loved, lack of maternal affection, lack of joy, fun, and happiness, feelings of guilt, self-contempt, worry, fear, restlessness, and emotional problems of a negative and avoidant type.

However, it is common to find in institutionalized children certain types of neurosis, a tendency toward anxiety and depression, low tolerance for frustration, lack of empathy, internalizing, externalizing, and mixed behavior problems, pseudo-autistic behaviors, ADHD, behavioral disorders, problem emotional disorders, reactive attachment disorder, social phobia, among others (Da Cunha & Barreyro, 2015; Fernández-Daza & Fernández-Parra, 2012; Herrera & Shae, 2016; Janin, 2014; Lafuente & Cantero, 2010; Moreno et al., 2010).

(d) Social development. Institutionalized children frequently feel stigmatized, have problems at school, and have no visits from their relatives (if they have them), causing sadness. These children show indifference toward people, remain still and expressionless, do not smile, and show disinterest toward others and the physical environment; there is disinterest in the immediate environment and resistance to facing new situations. They are children who have few social competencies and skills, but have difficulties in socialization; specifically, they show difficulties integrating into their groups, aggressive behaviors, a tendency to be alone, little social maturity. They also have few cooperation and communication skills; a tendency to destroy objects or to treasure them, antisocial behaviors; they tend to harm themselves and in school they frequently present school maladjustment, low academic performance, and educational failure (Fernández-Daza & Fernández-Parra, 2012; Lafuente & Cantero, 2010; Moreno et al., 2010).

On the other hand, diverse factors have been detected that can lead to the presence of some of the alterations described above, these factors are:

– Institutional factors, time of institutionalization, age at admission to the institution, form of admission, physical resources of the center, quality of care for caregivers, and number of caregivers in proportion to children (Malacre, 2014), as well as experience of life within the institution. An important aspect to mention is that early and prolonged institutionalization has detrimental effects on health and on physical and cognitive development that can become irreversible (Luján, 2015; Palummo, 2013).
– Factors related to their family of origin: socio-family history, lack of affective, stable, and continuous relationships, the reason for admission to the institution, harmful family history (fetal alcohol syndrome, neglect, abuse, prenatal exposure to drugs), and previous life experience at home (Domínguez, 2012).

Therefore, institutionalization leaves an indelible mark on the child's life, which is why psychological intervention is essential.

Institutionalized Children: Findings of Research

The situation of institutionalized children has attracted the attention of researchers who, through their findings, have made important contributions in order to improve the quality of life of these children. Pioneering studies that have become a reference in this field were those carried out by Spitz (1999), Gesell and Amatruda in 1945 (Lafuente & Cantero, 2010), and they opened up this line of research.

Spitz (1999), in his studies in institutions, found that institutionalized young children presented indifference toward other people, characterized by remaining still, expressionless, and with resistance to smiling, as well as indifference toward the physical environment and toward the objects that are in it. Manifesting as a lack

of interest in what happens around them, including toys, they also present a delay in motor development and motor alterations such as stereotyped movements, as well as delays in intellectual development. Furthermore, Spitz detected in babies a type of depression that he called anaclitic depression, in which the baby falls into a state of marasmus, the most serious consequence of institutionalization.

These characteristics were also found by Gesell and Amatruda, in addition to self-absorption, lack of response to stimuli, lack of motivation, poor concentration capacity, impoverishment of initiative, resistance to facing new situations, delay in language development, which shows the serious consequences of this measure (Lafuente & Cantero, 2010).

Recently, in Spain and Latin America, research has been carried out that has contributed to the knowledge of the subject from different lines of psychology and addressing issues of this phenomenon, some of them have even become a reference; these investigations are described in the following.

In Spain, Fernández et al. (2009) and Domínguez (2012) studied the causes and consequences of institutionalization. the former states that the main causes of institutionalization are homelessness, physical abandonment, abuse, death, drug addiction, parental imprisonment, begging, disability, inability to fulfill parental functions, conflict in the minor, and migration of the child without the accompaniment of the father, resulting in difficulties in social adaptation, educational problems, and behavioral problems, such as the presence of disruptive behaviors and coexistence. In the second study, it is mentioned that institutionalization correlates with aggressiveness, antisocial and aggressive behaviors, as well as with the presence of educational problems.

Jimeno (2015) mentions that the consequences of institutionalization are emotional, affective, and social difficulties, especially in children who have had a previous history of abuse. In Latin America, the studies indicate investigation of the causes, the conditions of upbringing in the institutions, the conception that caregivers have about the children in their care, the development of the institutionalized child, and the consequences of institutionalization. The general causes of institutionalization, as mentioned in previous paragraphs, are mainly aimed at the family situation, poverty, abandonment, violence, and abuse; however, in Colombia, they differ as these causes are added to displacement, national or international migrations, natural disasters, armed conflict and disability, aspects that cast a very peculiar profile in institutionalized children (Durán & Valoyes, 2009). In the same line, Pineda (2014) in Guatemala, takes the causes of institutionalization and groups them into family, social, and economic factors. It is worth mentioning that in Guatemala the causes coincide with those reported in other countries.

A factor that influences the rearing conditions of institutionalized children in the conception that their caregivers have about them; in Colombia, Sánchez et al. (2019), found that caregivers have three different conceptions of institutionalized children: wellbeing children (they are children who do not present difficulties in their development and with the possibility of adoption), children in need and resilient children. These conceptions affect different forms of relationships and daily care practices established between caregivers and children. The conception of the

child as the child of well-being is related to an educational bond, the conception of the child as lacking is related to a care relationship, and the conception of the child as resilient is linked to a nurturing relationship; thus, the care given to children depends on this conception.

Along the same lines as the caregivers, Moretti and Torrecilla (2019), in Argentina, found that the lack of a figure of exclusive, stable, meaningful, available, and sensitive care for the child leads to delays and difficulties in the cognitive, socio-affective, physical, and neurological development, and impacts on psycho-physical health. In this regard, Malacre (2014), in Uruguay, highlights the importance of the first links for the adequate emotional development of children and the possible effects of emotional deprivation in early childhood. In institutionalized children, there is an interruption of the bond with their parents, as they go on to live and be cared for by the institution through the figure of the caregiver; therefore, the breakdown of the bond with their parents affects their emotional development. Herrera and Shae (2016), in Chile, also highlight the importance of the environment and the link with a stable caregiver to establish a secure attachment. Many institutionalized children who show detachment and it is not only due to the unstable relationship with their caregiver, but also because their life history prior to institutionalization did not favor the establishment of a secure attachment, which affects interpersonal relationships. In addition, in Uruguay, the link between the institutionalized child and the caregiver and its repercussions for development have also been studied (Rojas, 2018).

I study of the consequences of institutionalization is most frequent line of research. The study by Fernández-Daza and Fernández-Parra (2012) in Venezuela shows that institutionalized children and adolescents present more behavioral problems of all kinds (internalized, externalized, and mixed) than in the general population. They also show a worse academic situation and fewer psychosocial skills.

Saurina (2015) in Uruguay mentions that the absence of medical care, malnutrition, and a chaotic family environment (insensitive to the needs of others, more frequently in contact with aggressive behaviors, criminal behaviors), are some of the variables that have repercussions for the children who arrive at the reception institutions, being able to generate neurological, immunological, cognitive, social, and emotional alterations in the child, during one of the stages of greater development. These variables are added to the deficiencies resulting from lack of care or inadequate care, incorrect nutrition, and separation from the main attachment figure. Regarding the latter, the effects of maternal separation on the child differ according to the stage of development at the time of separation, from previous experiences (including the dyadic and family bond) of the characteristics of the separation (duration, antecedents in quantity and quality, traumatic circumstances surrounding the separation itself), and fundamentally the permanence of a significant adult for the child who provides the personal attention that the child needs.

Da Cunha and Barreyro (2015), in Brazil, in their studies on depression in institutionalized children, mention that institutionalization and its causes can contribute to the occurrence of depression. They mention that depression can be the result of a trauma suffered by family separation and makes it difficult to establish new ties.

Regarding delays and complications in cognitive development, Deambrosio et al. (2018) in Argentina found that institutionalized children have low performance in tasks that value intellectual capacity and memory. Likewise, there are impairments in verbal intelligence, such as fluid intelligence associated with the prefrontal regions of the brain and different memory skills that involve the retention of verbal and nonverbal material.

In Mexico, the study of institutionalized children is complex given regulations and restricted access to host institutions; hence, the research is also restricted. However, studies have recently been carried out in Mexico such as Romero-Garza's studies (2014), which present life stories of institutionalized children and adolescents, reporting their experience throughout the years within the institution and how it has affected their lives, how it is difficult for them to insert themselves into society when it comes time to leave the family homes, given their few tools and personal skills.

For their part, Vallejo and his collaborators have established a line of research since 2016 with institutionalized children, studying aspects such as the notion of family (Rodríguez and Vallejo, 2016, 2017), institutionalized children as victims of aggression by their companions (Vallejo et al., 2017) and social skills in this population (Vázquez and Vallejo, 2020). The notion of family that institutionalized children have is that of a substitute or social family, made up of caregivers and other children, so they have multiple mothers and siblings who replace the family of origin (Rodríguez and Vallejo, 2016). However, there will always be the desire to know their family origin, especially in abandoned or orphaned children since they present a mobilization of the drive for knowledge, so even though the institution hides their origin, also within this concealment, the children are psychically constituted without knowing and where they come from (Rodríguez and Vallejo, 2017). On the other hand, institutionalized children become victims of attacks, especially girls, who suffer harassment from their schoolmates. Harassment manifests itself through psychological harassment aimed at lowering their self-esteem and promoting feelings of insecurity and fear, in addition to putting their psycho-affective development at risk (Vallejo et al., 2017).

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In México in 2012, Manzo opened the line of research on "institutionalized childhood," in which a group of institutionalized children, now adolescents, were monitored and the institutionalization issue was approached from different perspectives such as the attachment, development theory, family perception, reintegration

into the home, adoption, and various psychological intervention programs. In this research, the project "Diagnosis and Intervention Program for Adoption" was carried out as part of an agreement between the Academic Body of "Studies on childhood and adolescence" (CA-UMSNH-119) and the State DIF System (Desarrollo Integral de la Familia). As a product of this line of research, the following studies were conducted.

Manzo and García (2018) investigated the perception of the mother figure in children from family homes; they report that the maternal figure has either been annulled or they attribute negative characteristics to it, in addition to the fact that it is a figure that causes them anxiety. They are also children who have not been able to establish a bond with their caregiver, who could act as a surrogate mother, owing to the constant rotation of caregivers and the distant relationship they have with them. Thus, the pain that the separation from the mother implies causes these feelings and the denial of this figure. This study lays the foundations for exploring the notion that these children have about the family, finding that they perceive it as a disintegrated group, where the mother has the aforementioned characteristics and the father is also a negative, distant, and inaccessible figure, who is absent, and who causes anxiety. Siblings are seen as figures of support and identification, regardless of whether they are consanguineous siblings or housemates; therefore, they conclude that separation from the family and institutionalization affect the notion of the family of origin (Manzo & Rodríguez, 2018).

Regarding the intervention, Manzo and Jacobo (2019) designed and implemented, after a contextual diagnosis, a psychological intervention program with institutionalized children facing reintegration into the home, based on workshops on the management of emotions and the development of social skills, in order to facilitate this reintegration.

Regarding the psychological and emotional impact of institutionalization in children, Manzo (2020), in "*General characteristics of development in institutionalized children", presents an investigation with a qualitative approach and descriptive scope, where he worked with 13 children (6 girls and 7 boys) institutionalized, between 6 and 12 years of age, from three child care institutions, in the city of Morelia Michoacán Mexico, one of which manages the family model of child care, which the following data collection instruments and techniques were applied: the Development History, the Doll's Social Maturity Scale (Revised) (Vineland,* 2006), the Goodenouch Child Intelligence Test (Revised) (Ramírez, 2014), the Free Drawing Test (Revised) (Martínez, 2013), semi-structured interviews with children and their caregivers and review of their files. The participants were assigned by the authorities of the Homes, for which a convenience sample was used (Hernández et al., 2010), at the times and dates assigned by the Institution. Once the data collection techniques were applied, the information was organized, codified, and categorized. For this, matrices were elaborated and analyses were carried out at two levels, following the procedure proposed by Hernández et al. (2010). Reliability and validity were taken care of through triangulation with experts and instruments.

Regarding institutionalization, the results found indicate that the age of admission ranged between 0 and 7 years of age, with the average age being 3 years; the

reasons for admission were abandonment, parental inability to care for children, domestic violence, mistreatment, neglect of care, sexual abuse, and homelessness. These children have suffered the rotation of family homes and caregivers, living in up to eight houses; only children living under the family childcare model have not undergone rotations. Of the 13 participants, only 2 were candidates for adoption.

Regarding the impact of institutionalization, the following consequences were found:

(a) Cognitive aspect. There were alterations in reading and writing, memory deficits, reasoning problems, and language problems. In the sexual area, they tended toward precocity, conflicts of sexual identity, tendency toward masturbation, over-eroticization, and intense sexual impulses. In the social aspect, children have difficulties to socializing, difficulties in limitations, disruptive and/or maladaptive behaviors, and aggressive behaviors. They tend to create closed peer groups with other children in the same situation; they are children rejected for their behavior and learning problems. At school, they have problems of adaptation and educational performance.

    Most important findings were the various medical, psychiatric, and/or psychological diagnoses such as infantile psychosis, ADHD, cerebral hypoplasia, Doose syndrome, mycophagy, anxiety disorder, dysthymia; likewise, there are imprecise diagnoses (only "psychiatric diagnosis" is mentioned in the file). All children diagnosed were taking medication. Of all participants, only 4 children had not been diagnosed.

(b) Emotional aspect. Self-esteem and self-concept are low. The ability to express emotions is limited. They do not establish emotional ties. They show feelings of sadness, loneliness, and anger, sensitivity, low self-esteem, depressive features, anxiety, distress, need for affection, insecurity, frequent tantrums, low tolerance for frustration, passivity, tendency toward fantasy, isolation, and withdrawal. A few have traits of happiness, spontaneity, and high self-esteem; they are affective.

Therefore, it was concluded that the difficulties found in the children in the study can be attributed to several factors such as the family environment of origin, the mistreatment, abuse and/or violence of which they were victims, the separation from their family, their own institutionalization, the constant rotation of family homes and caregivers, among others; these factors coincide with those mentioned by Lafuente and Cantero (2010) and Moreno et al. (2010). The psychological and emotional characteristics found in the children are similar to those presented by Mussen et al. (2000), Muñoz & Mahn (2005), Lafuente and Cantero (2010), Moreno et al. (2010), and Fernández-Daza and Fernández-Parra (2012. The finding of the various diagnoses and medication suggests a review of by specialists in the area to avoid pathologization. Likewise, the intervention of a multidisciplinary team is suggested to carry out interventions from various aspects and improve their present and future quality of life.

Final and Prospective Considerations

The institutionalization of children as a measure to protect their physical, psychological, and social integrity has emerged for centuries in the field of orphanhood, the orphan being a figure that required protection and care provided by people of good will and/or under the mandate of religious precepts and through the orphanage (the institution). Currently, most of the children who arrive at the institution (now called Casa Hogar) are not orphans, but are children who are in a situation of physical, psychological, and/or social risk, remaining under the protection of the State, which is in charge of regulating these Homes, suffering the separation from their family of origin and integrating in these, many times without hope of being reintegrated to their home of origin or being adopted by another family to their legal situation, which leads them to live in the orphanage until the age of majority. On the other hand, many adoptable children are not adopted, also living their childhood and adolescence in the institution.

Therefore, institutionalization is a complex phenomenon, with many aspects such as psychological, medical, legal and social aspects, among others. In the case of psychology, some of the recent lines of research (from 2009 to 2020) point in Spain toward the causes and consequences of institutionalization (Domínguez, 2012; Fernández et al., 2009; Jimeno, 2015). In Latin America, in addition to studying the causes and consequences, the upbringing and bonding of institutionalized children have been studied (Da Cunha & Barreyro, 2015; Deambrosio et al., 2018; Fernández-Daza & Fernández-Parra, 2012; Malacre, 2014; Moretti & Torrecilla, 2019; Sánchez-Reyes et al., 2019) and in Mexico the studies have focused on the family and social aspects (Manzo & Rodríguez, 2018; Rodríguez & Vallejo, 2017; Vallejo et al., 2017).

The results of these investigations have revealed that the institutionalization of children and adolescents in Spain, Latin America, and Mexico is multi-causal and has a negative impact on their development and in many aspects of their lives, owing to the separation from their parents, the lack of loving contact, the shortcomings of the institution, the massive care of children, the lack of affective ties and that at the time of leaving the institution they have few personal, family, psychological, social, educational, and financial resources to ensure satisfactory social insertion. Pineda (2014) and Herrera and Shae (2016) elaborated a profile of the institutionalized child.

In the case of Mexico, in addition to having studied the causes and consequences of institutionalization, the studies point to the family aspect in terms of the desire to know their origin, the notion of family, and the preparation for the return to the home of origin (Rodríguez & Vallejo, 2017; Manzo & Jacobo, 2019). In addition to knowing the social situations they face, the stigma of being an orphanage child marks them out in their social and relational insertion, facing rejection and even aggression (Vallejo et al., 2017).

Regarding Manzo's line of research on institutionalized childhood, his studies have been focused on family (Manzo & García, 2018; Manzo & Rodríguez, 2018),

intervention for reintegration into the home (Manzo & Jacobo, 2019), and the psychological development of children who live in an institution or residential care (Manzo, 2020). As for the family aspects, their results complement what was found by Rodríguez and Vallejo (2016, 2017), as they have studied the desire to know the family origin and the conception of family in institutionalized children. In the latter issue, similar results were detected in terms of the figures of housemates who are perceived as siblings, having the notion of a substitute family based on their caregivers and housemates (Manzo & Rodríguez, 2018).

Regarding the psychological development of institutionalized children, the results are consistent with those reported in previous studies (i.e., Fernández-Daza & Fernández-Parra, 2012; Lafuente & Cantero, 2010; Moreno et al., 2010; Muñoz & Mahn, 2005; Mussen et al., 2000). Thus, it is possible to think about a profile of institutionalized children as Pineda (2014) and Herrera and Shae (2016) suppose, considering that one of the reasons in Mexico is protection against organized crime.

On the other hand, it could be observed that research in Spain, Latin America, and Mexico shows a general vision of the phenomenon of institutionalization; however, psychological intervention with this population is still scarce, despite being an imminent need. All these investigations have opened the door to the reflection of the convenience of institutionalization; for this reason, the experts have even mentioned that owing to the damages that institutionalization causes, it must "be limited to absolutely exceptional cases and for short periods" (Palummo, 2013, p. 12), to which various protection alternatives are recommended, such as residential care, reintegration into the home, and foster care in foster homes, streamlining the adoption processes.

These alternatives are already being applied in Spain, where said protection alternatives are offered to children and institutionalization has become one more option but not the first or only option (Gobierno de Navarra, 2003). These changes in the modalities of child protection imply the elaboration of proposals that lead to new public policies in Latin America and Mexico and constitute a challenge regarding the issue of child protection. From the field of psychology, research in this population is recommended, providing information that leads to the design of intervention proposals, not only psychological but also multidisciplinary, to offer various tools to these children and their caregivers to improve their quality of life within and outside the institution, as well as opening other lines of research aimed at other little-studied aspects, such as the positive features of institutionalization.

Because working with institutionalized children is complicated, the researcher faces a series of procedures before entering the institution, such as restrictions regarding the performance of their work by the authorities, little access to information, restricted and/or supervised contact with children, and resistance to the work by children. This makes it difficult to carry out research and intervention projects, although institutionalization is an important phenomenon in the field of childhood study, there are many barriers to approaching it, limiting the field of action and the benefits that, this unprotected and vulnerable sector could have, that would lead them to have a better quality of life.

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