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Poverty and Mental Health Outcomes in Mexican Adolescents

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<http://dx.doi.org/10.5772/65513>

Abstract

The purpose of this chapter is to analyze the adaptive and resilience processes in adolescents from different marginalizing communities. The theoretical and empirical foundations of the ecological-transactional perspective of adolescent development as a framework for understanding the adaptive processes and resilience in contextual adversity is reviewed, with the recognition of risk and protective factors at multiple levels and ecological settings. Under this perspective, the authors provide data supporting the predictive role of stressful life events, coping, and family functioning in adaptive and nonadaptive outcomes in adolescents living in diverse contexts of high-risk communities in Mexico City. These findings may contribute to early intervention programs based on empirical evidence with adolescents and families living in disadvantages communities in schools and in clinical settings.

Keywords: adolescents, resilience, poverty, mental health, adaptation

1. Introduction

Adolescence is a transitional and vulnerable period in the life cycle. Particularly for those living in countries where access to mental health (MH) services is low, it is necessary to promote preventive interventions based on evidence. The purpose of this chapter is to analyze the adaptive and resilience processes in adolescents from different marginalizing communities. The theoretical and empirical foundations of the ecological-transactional perspective of adolescent development as a framework for understanding the adaptive processes and resilience in contextual adversity is reviewed, with the recognition of risk and protective factors at multiple levels and ecological settings. Under this perspective, the authors provide data supporting the predictive role of stressful life events, coping, and family functioning in adaptive and nonadaptive outcomes in adolescents living diverse contexts of high-risk communities in Mexico City. These

findings may contribute to early intervention programs based on empirical evidence with adolescents and families living in disadvantaged communities in schools and in clinical settings.

2. An ecological framework for understanding youth outcomes in high-risk contexts

For more than four decades, development researchers appear to be concerned with children and adolescents living in a situation of considerable adversity, including poverty or social marginalization, and thus trying to understand those mechanisms that draw them either to a path of psychopathology or to positive adaptation [1–3]. The findings provided a set of questions regarding the traditional assumption that situations of risk and stress are “inevitable” linked to psychopathology. This questioning broke down previous schemes of child development, inviting new theoretical and methodological proposals to appear. Thus, a more comprehensive and positive perspective about the human development emerged, which involves the possibility of positive adaptation together with the reconstruction, from experiences, in the face of adversity. With this, the focus extended toward the study of strengths despite significant stress and risk, also known as resilience. Its study is originated in the model of “developmental psychopathology,” proposed through longitudinal investigations made by Garnezy and Rutter [4] with children living in contexts of poverty, psychosocial risk, and parents with mental disease. Likewise, the model is based on multifactorial research carried out by Werner and Smith [3], among others, with vulnerable population which, contrary to predictions, presented positive adaptation.

Developmental psychopathology represents a macroparadigm that resumes basic assumptions of both systemic [5] and bioecological approaches [6]. This perspective implies the intersection between the fields of clinical and human development and it also includes contributions from neurosciences, ethology, and psychiatry. It is focused on children and adolescents within different ecological levels that involve risk, vulnerability, adaptation, and resilience [7, 8], and it also recognizes the multidimensional nature of adaptation. For this reason, the evaluation and intervention methods are multifactorial, multilevel, and multireferential. Also known as “ecologic-transactional perspective” [9] and “organizational model” [10], this new approach assumes that adaptation is the result of an organization of different systems that interact dynamically. It also includes particular theories and approaches that frame the investigation in multiple contexts and settings, such as hospitals, schools, mental health (MH) centers, and courts and with different risks like sexual abuse [11], mental diseases in parents [12], psychosocial risk and marginalization [13], and poverty [14].

Under this perspective resilience is a multidimensional construct with two basic components: positive adaptation and the presence of significant stress, risk, and/or adversity [8]. Luthar [7] defines resilience as those behaviors within a norm and a relatively good outcome in the face of a context of risk and vulnerability. Resilience is a supraorganized construct that presents adjustment indicators both negative and positive emotional and behavioral and not always in directly observable behaviors [8]. Thus, resilience has to be inferred comparing individual's outcomes among individuals with similar experiences of adversity [12]. So the study of resilience, in terms of trajectories and outcomes, is still very useful, in order to design prevention and promotion programs aimed to strengthen the positive youth development [15, 16].

In the last years, the study of resilience has encompassed various domains, fields, and problems. Among them, an important area is the one in charge of studying positive adaptation processes in children and adolescents that live in contexts of high risk, such as poverty and low socioeconomic status (SES). In this sense, poverty is a distal multidimensional factor considered a risk factor due to its link with other adversities and sources of stress such as economic constraints [17], child maltreatment, [18], alcohol abuse [19], and negative parenting [20] which can be operating cumulatively or as a risk cascade [21]. There is evidence that economic distress may cause daily hassles and family conflicts which either directly or indirectly negatively influence the adolescent's health [22].

UNICEF [23] points out that the experience of childhood occurs each time more often in an urban environment allowing children to enjoy the advantages that urban life offers, such as education, medical services, and recreational facilities. However, a countless number of children lack basic services despite having them close. Socioeconomic inequality has an impact on adolescent health, particularly in countries with low- and middle-income, where rapid economic and urban growth leads a large number of adolescents to displacement and deprivation and finally unemployment. Therefore, this has a negative impact on mental health outcomes; for instance, an increase of suicide and also mortality related to violence [24].

It is interesting to evaluate whether this impact derives from income *per se* or also from other family conditions that coincide with an environment of poverty: monoparental families, low educational level, unemployment, and underemployment. These sociodemographic factors affect health in different moments in the life course and operate two different levels and through causal differential mechanisms [25]. It is important to identify other factors that mediate between the distal context (socioeconomic status) and adolescent results, since usually family is a mediator between the adolescent and his environment. Thus, some family factors are described as being the ones with higher prevalence in an environment of poverty. These include emotional distress (e.g., depression, irritability, emotional liability), substance abuse by parents, less solid parenting styles which are more punitive and inconsistent, mostly chaotic environments, with fewer stimulation and regular routines as well as restricted learning opportunities and reduced accessibility to parental interaction [26].

In short, multifactorial research emphasizes the importance of a balance between personal, familiar, and social protective and risk factors for resilience [18, 27, 28]. The understanding of adaptation profiles and mechanisms of adolescents, who present a relatively good outcome despite living in an environment of psychosocial risk and poverty, could be the basis for designing programs with an ecological framework based on evidence [29]. The programs should be aimed at promoting positive adaptation, teaching coping skills, and a positive parenting in both adolescents and their families in accordance with global mental health policies [30].

3. Adolescent mental health problems: risk and protective factors

The concept of risk borrowed from the medical model and then transferred to social sciences refers to those characteristics of a person, or of the environment, that limit, impede, or

represent a threat for his development having as a consequence negative outcome [9, 20]. Statistically this involves a higher probability of presenting an alteration in the course of development in “critical” domains. Vulnerability entails personal and environmental factors that increase the negative effects of a risk condition [7]. Protection is a process in which individual and environmental factors participate and attenuate the impact of stress and risk. Because of their contribution to positive adaptation they are called protective and can be defined based on personal attributes such as coping, personality [31], self-efficacy, and also environmental ones like a functional family organization or family care [11]. This perspective suggests that factors of risk and protection belong to multiple levels, from individual to contextual (family, school, community) and of a diverse domain (biological, psychological, and social), and throughout life [32].

What is mental health and mental health problems (MHP)? Mental health (MH) is defined as the “successful performance of mental function that results in productive activities, fulfilling relationships with other individuals and the ability to adapt to change and cope with adversity” [33: p. 6]. Mental health problems (MHP) include signs and symptoms which are not intense or lengthy enough so as to fulfill the criteria of a certain mental disorder. The term mental or psychiatric disorder refers to the group of disorders diagnosed according to medical classification systems like DSM5 and ICD-10 [33]. These include a series of conditions characterized by thought, mood, or behavior disturbance (or a combination of them) and associated to an altered functioning or personal suffering.

Children and adolescents constitute a third of the world's population (2.2 billions) and a 90% of them live in low- and middle-income countries (LMIC) where they represent 50% of its population. Although adolescents are considered to be a healthy population group, it is during this period of their lives that they are confronted to risk processes decisive in their future health, like drugs, tobacco and alcohol consumption, unsafe sex, obesity, and lack of physical activities. Under these circumstances, mental disorders increase [34]. It is known that neuropsychiatric disorders are the main cause of global burden (accounting for 15–30% of the disability-adjusted life years, DALYs) and the world prevalence of these disorders is calculated to be among 10–20%. However, there is a gap between the need and the existing resources in these countries [35].

A recent meta-analysis of research carried out in 27 countries (regions in North America, South America, Caribbean, Europe, Africa, Asia, and Oceania) specifies a number of 13.4% of mental disorders that affect children and adolescents, just slightly below obesity (16.8%) and above asthma (8.5%) [36]. However, there is a scarcity of youth health and well-being indicators at an international level and the ones available are for high-income countries (HIC). It is therefore recommended to carry out research for those health aspects that have been ignored in adolescent health: mental health, health systems, and risk and protection factors in their immediate context.

The most prominent distal risk factor associated with mental health problems in children and adolescents is low socioeconomic status (SES). It is suggested that the study of the relationship between SES and MD includes disaggregation in its indicators in order to explain the mechanism through which poverty impacts in adolescent's results. McLaughlin [37] estimated the association between SES and MD in a representative sample of U.S. students and noted that a

subjective perspective of social status was one of the indicators more directly associated to mental disorder. Parents' education level is associated with a low risk of anxiety disorders and relative deprivation as a high risk for affective disorders. Another mechanism supported in research data is the inverse relationship between parents' education and the use of health services and/or treatment [38, 39]. Even in high income countries, most adolescents with a psychiatric disorder do not receive treatment and once it occurs, it is not provided by a mental health specialist [40].

In Mexico, the prevalence of mental disorders in adolescents was measured through Mexican Adolescent Mental Health Survey [38] and it revealed that 39.4% of the adolescents, from 12 to 17 years, presented a mental disorder measured by CIDI and DSM-IV criteria: 1/11 had a serious disorder; 1/5 moderate; and 1/10 mild. Anxiety disorders were the most prevalent ones in both sexes. In men, oppositional-defiant disorder and alcohol abuse appear as the second and third main ones, respectively, after specific phobia and social phobia. The most frequent disorders in women, after anxiety (phobias) were major depression and oppositional-defiant disorder. Most of them did not receive treatment. Two-thirds lived with their parents, four-fifths were students, and one-tenth had social burden. Social burdens associated to a probability of mental disorder were: being married, having a child, and working while studying. Parents' education was related to the use of treatment. The relationship between mental disorders and other indicators of well-being is not yet available in Mexico.

In comparison to other OECD [41] countries, Mexico ranked the bottom third regarding children and adolescent well-being with the next indicators: income and wealth, housing

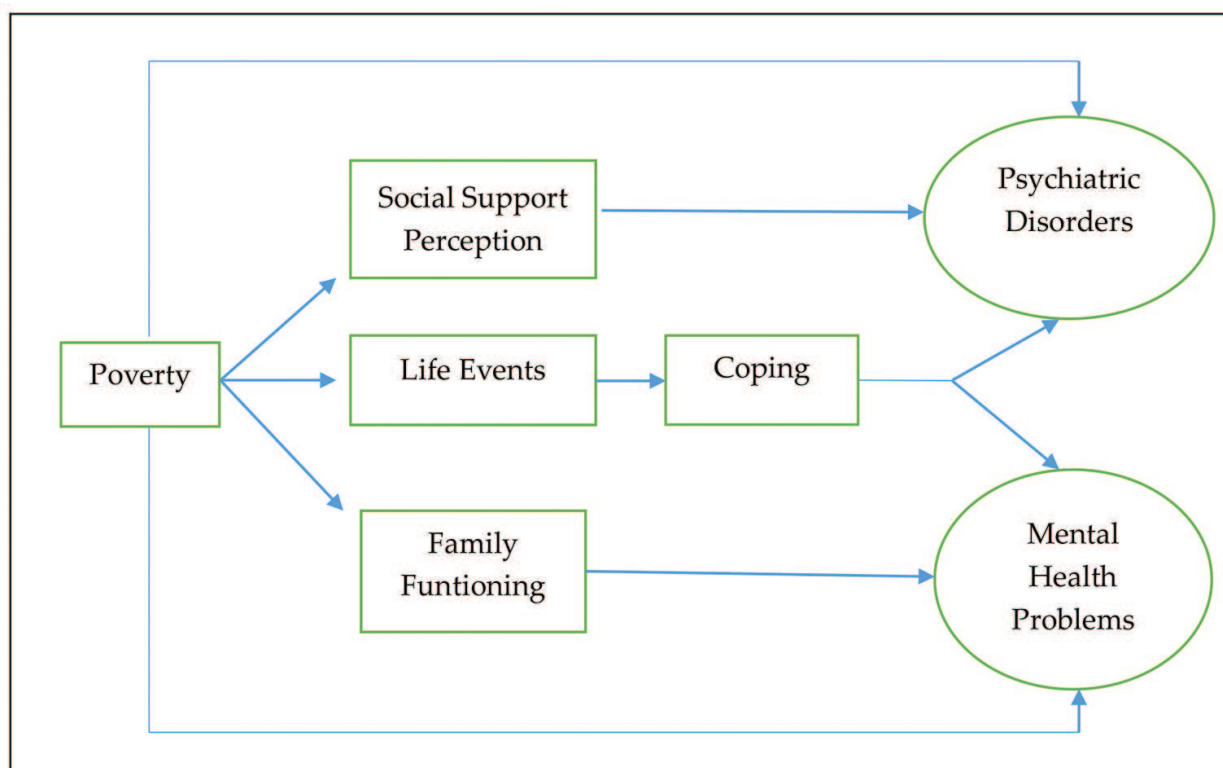


Figure 1. A research proposal-intervention for adolescents in disadvantaged communities.

condition, infant mortality, teenage birth rate, reading skills among 15 years old (PISA), and youth neither in employment nor education/training, among others. These data show the situation of Mexican adolescents and their families and at the same time represent different challenges in the ability of adapting, including the flexibility to generate new personal and familiar functioning ways. Hence, the research line proposed for adolescents living in a high risk context includes proximal and distal variables that allow, based on evidence, to identify “clue” elements for intervention and promotion of adolescent development. Literature shows how elements such as coping and familiar functioning (communication and familiar cohesion) work are protective variables in contexts of poverty that buffer the effect of psychosocial risk.

Finally, although it is proposed [35] that the risks factors are similar in HIC to those reported in LMIC, resilience research is scanty in LMIC. Hence, we propose a theoretical model aimed to understand risk/protective factors underlying adaptation and resilience in **Figure 1**. The research data that were generated is described in Section 3.

4. Adapting processes and resilience in multiple contexts

According to our previous statements, adolescents’ outcomes result from a complex process involving the dynamic interaction of multiple factors at multiple levels. A salient individual factor explaining the mechanism of adaptive or maladaptive outcomes is coping. However, in the field of resilience it is needed to take into account the social context of adolescents in order to analyze the relationship between stressful life events and coping in multiple contexts, clinical and nonclinical, in disadvantaged communities.

4.1. Stress life events and coping in disadvantaged communities

Adolescent stress approaches [42–44] based in Lazarus’ transactional model [45] emphasizes the importance of individual characteristics, stressors, and context. There is evidence that both, major and daily events or hassles, due to its frequency, intensity, and duration represent a high stress burden [46]. However, according to the compensatory model of resilience [8] positive events can buffer the negative effect of these stressors [46, 47]. Family stress theory [48] shows that daily stressful experiences associated to a socioeconomic disadvantage usually generate family crises and mental health problems affecting whole family system and family members [49]. The “Context Model” (e.g., risk-stress model) suggests that families in disadvantaged societies are exposed to multiple risks, most of them related to a lack of money [50]. Economic pressure represents a chronic stressor associated to mental health problems including anxiety and depression. Therefore, it supports the notion of relationship between economic hardship, family conflict, and emotional disorder [17, 22].

In a Mexican context, it is reported that around 80% has experienced an adverse event in a year and that to a higher number of adversities there was also a higher probability of psychopathology [51]. This coincides with previous data regarding stressors and internalizing an externalizing problem [22, 50, 52]. The difference between youth risk, for instance, with or without suicidal ideation [53], drug consumers or nonconsumers [54] and adolescents with or without

psychopathology [55] is the number, type, and source of stressors, generally related to family, in which, even normative life events, can be perceived negatively by adolescents [46]. Regarding this, our research line¹ has been oriented to analyze adaptive processes in adolescents and families of marginalized and high-risk communities in metropolitan area of Mexico City. A cross-sectional study tested a model on resilience [56] in 538 students aged 13–18 years who were provided with the life events questionnaire [57] and the MMPI-A [58]. Findings showed an overall model ($R^2 = 0.278$; $X^2 = 16.294$; $p > 0.05$) with stressful life events as negative predictors of adaptation ($\beta = 2.118$, $p = 0.000$). These findings were also replicated in older adolescents confirming the contribution of stressful life events and perceived social support on resilience [59]. In concordance with previous research [17, 46, 47], data showed the negative influence of stressful life events on adaptive processes.

On the other hand, there is systemic evidence regarding coping as a relevant factor playing a mediator and/or moderator role in stressful experiences and adolescent outcomes. Resilient adolescents and families with a kind of adversity frequently present problem solving and seeking social support. The adverse effect of negative contextual experiences and parental conflict can be buffered with functional coping, being a predictor of resilience [60]. Coping reduces the negative impact of family stress which derives from economic pressure [61]. Similar data were founded in Mexican adolescents: problem solving, seeking social support, and spirituality were the strongest predictors of resilience in poor adolescents [62]. However, its protective function can be diminished due to influence of negative peers or negative models of parental and family coping [63]. On the contrary, adolescents that present an emotional problem like anxiety, depression, or aggressive behavior, basically use avoidance coping [50, 60, 64].

Recently, a cross-cultural research that compared styles and coping strategies between Mexican and Paraguayan students was carried out [65]. Participants completed the adolescent coping scale [43] and results showed that both samples used mostly productive strategies. However, problem solving and effort to achieve success was more frequent among Mexican adolescents, whereas Paraguayan reported a higher level of seeking spiritual support and slightly higher nonproductive strategies than Mexican students. Although adaptation was not assessed, results are similar to others cross-cultural studies [43, 64].

The relationship between coping and externalizing and internalizing behaviors and resilience was assessed with earlier adolescents. Results showed higher scores in productive strategies (e.g., physical recreation and seek relaxing diversions) [66] and nonproductive strategies (e.g., worry and not cope), which significantly related to both, internalizing (i) and externalizing (e) problems. When testing a model of resilience [67] active coping, perceived control, and family support predicted negatively, internalizing ($R^2 = 0.364$; $F = 97.47$; $p < 0.001$) and externalizing behaviors ($R^2 = 0.279$; $F = 63.564$; $p < 0.001$). Positive qualities (e.g., prosocial behavior, positive self-concept) were predicted by positive thinking, perceived social support, and self-control ($R^2 = 0.229$; $F = 57.597$; $p < 0.001$). As hypothesized, a set of personal and familiar

¹Current research “Adaptation and resilience in multiple contexts. Basis for the intervention in adolescence” (PAPIIT IN303714). Research granted by DGAPA, National Autonomous University of Mexico.

resources was related to all syndromes or behaviors as the literature regarding resilience has reported [13, 18, 19, 68].

In brief, coping is relevant for adolescent adaptation in adverse context, although its multidimensional character sets questions with regard to its role and the nature of its relationships with other personal, familiar, and contextual variables which also contribute to resilience.

4.2. Family functioning in clinical and nonclinical adolescent settings

Family represents the first scenario, which is at the same time the most natural and lasting one, of the individual-context interaction. Family factors are suggested to be a determinant in health during the course of life and among different cultures. Supportive parents and families are “crucial part in the improvement of global health” [24, p. 1647]. However, it is not possible to ignore the influence of macrostructural factors that shape the individual and familiar development such as the economic crisis that characterizes low- and middle-income countries (LMIC) like Mexico. The family unit is a reflection of contemporary transformation processes and there is no convergence with a unique family model as it was proposed in the sociological theories of the 1960s [69]. It is hard to build a set of understandable generalizations of how family environments relate to the developmental life course from childhood to adolescence. This may be a result of both a wide array of measurements that evaluate the same constructs and variables and the complexity of the relationships itself.

The debate about the nature and impact of the psychosocial determinants in the trajectories and outcomes of the adolescent development is still open and to a certain level mediated by genetic factors [8, 10, 21]. Still, it appears that there is a universal agreement in the understanding of human development as an interactive process between the individual and the context, particularly family context. Developmental systems theories [16] and ecological-transactional perspectives [9, 10] suggest that high social risk contexts entail a series of adversities for adolescents and their families. Risk indicators include sociodemographic characteristics and structural and psychological markers that affect family functioning and adolescents’ adaptive processes. The most prominent influence in the family environment is poverty. Razavi and Razavi [70] highlight that SES influences the adolescent outcomes through parental communication, which acts as a predictor of emotional and behavioral problems. The association between low economic income, low academic level in parents, and addictions are described in the corresponding literature [9, 14, 19]. The effect of some families in the physical and mental health of their offspring has been also documented [48, 71]. The term risky families [9, 71] describes environments characterized by the presence of conflict and aggression. Family relationships in these environments are cold, neglectful, and unsupportive affecting the quality of parenting practices and contributing to adverse mental and physical outcomes in their offspring.

Schleider and Weisz [72] suggest a triadic model family process, formed by three main level factors: parent, dyad, and family (here family functioning is just one of its parts). This integral model incorporates processes of an adolescent, his or her parents and his or her family context, which has to a certain level an impact in the internalized problems of the adolescent. A set of family variables such as communication, social support, and parenting practices has been related to positive and negative outcomes (e.g., anxiety, depression, aggressive behavior) [73, 74].

In contrast with risk factors, family support (parental) often offered by the mother, is a source of protection for those adolescents with psychosocial risks and due to its protective character is also one of the strongest predictors of resilience [28, 73, 75]. Although a good part of the evidence that family connectedness are one of the strongest protective factors in mental health, comes from the U.K., Canada, and U.S., this phenomena is being confirmed in other cultures [24]. Our findings about family functioning perceived social support and resilience in poor Mexican youth [76] showed significant main effects of both, family functioning ($F = 18.60$; $p < 0.01$) and perceived social support ($F = 11.71$; $p < 0.05$) on resilience. In concordance with previous data [14, 28, 73, 75], mother's level of education, father's occupation, adolescent's daily spending money, conflict family, and friend perceived social support were predictors of resilience by using logistic regression analyses.

A cross-sectional study aimed to assess the influence of gender in psychopathology in adolescents attending a public mental health institution was carried [77]. Data was obtained from 67 adolescents (M_{age} 14 years, $SD = 1.49$) who answered the YSR [78] and a sociodemographic questionnaire. It was hypothesized that age and gender effects would be related to psychopathology, however, only gender main effects were found. Adolescent girls reported more anxiety/depression ($F = 6.186$, $p = 0.016$) and internalizing problems ($F = 2.740$; $p = 0.050$) at a significant level than boys. To evaluate the contribution of parent's rearing style in adolescent mental health problems, another correlational and predictive study [79] was carried in 117 low-income adolescents (12–years), attending mental health centers ($M_{age} = 14.02$; $SD = 1.70$). Participants completed a sociodemographic schedule, the YSR and the EMBU-A. Multiple regression analysis showed that the Rejection and Control of both parents were positive predictors whereas the Mother's Warmth predicted negatively: Internalizing ($R^2 = 0.297$; $p = 0.035$), Externalizing ($R^2 = 0.275$; $p = 0.001$) and Mixed Syndromes ($R^2 = 0.289$; $p = 0.000$). Preliminary conclusion suggests that negative parenting leads to negative outcomes as internalized problems, whereas positive parenting is a predictor of better psychological adjustment as has been reported previously [72–75].

In summary, linking family functioning, as well as parental rearing style is highly relevant in research. There is a need of cross-country studies of parenting constructs and adolescent (mental) health.

5. Conclusion

An ecological-transactional perspective encompasses a theoretical and methodological framework for a comprehensive understanding of youth outcomes. Although adolescents are regarded as healthy, the pressures of the globalized world imply multiple challenges and threats to their well-being. An increasing number of youth people suffer mental health problems and a gap between the needs and resource availability exists. Although most of the knowledge about the risk and protective factors arises from developed countries research is needed in the resilience field, particularly in developing countries where most adolescents live.

Poverty is linked to a number of adversities including stressful life events. However, the protective role of family factors and coping styles and strategies are just starting to be studied

in these countries. The interplay between stressful life events, coping, and family factors should be the basis to undertake research initiative as much as preventive intervention. Developmental trajectories in high-risk settings moving to well-being and mental health or to psychopathology may be the result of this interplay.

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