



Texto & Contexto - Enfermagem

ISSN: 0104-0707

ISSN: 1980-265X

Universidade Federal de Santa Catarina, Programa de Pós
Graduação em Enfermagem

Silva, Daniel Ignacio da; Mello, Débora Falleiros de; Mazza, Verônica de
Azevedo; Toriyama, Aurea Tamami Minagawa; Veríssimo, Maria de La O Ramallo
DYSFUNCTIONS IN THE SOCIO EMOTIONAL DEVELOPMENT OF
INFANTS AND ITS RELATED FACTORS: AN INTEGRATIVE REVIEW

Texto & Contexto - Enfermagem, vol. 28, e20170370, 2019
Universidade Federal de Santa Catarina, Programa de Pós Graduação em Enfermagem

DOI: <https://doi.org/10.1590/1980-265X-TCE-2017-0370>

Available in: <https://www.redalyc.org/articulo.oa?id=71465278146>

- How to cite
- Complete issue
- More information about this article
- Journal's webpage in redalyc.org

redalyc.org

Scientific Information System Redalyc

Network of Scientific Journals from Latin America and the Caribbean, Spain and
Portugal

Project academic non-profit, developed under the open access initiative


DYSFUNCTIONS IN THE SOCIO EMOTIONAL DEVELOPMENT OF INFANTS AND ITS RELATED FACTORS: AN INTEGRATIVE REVIEW

Daniel Ignacio da Silva¹ 

Débora Falleiros de Mello² 

Verônica de Azevedo Mazza³ 

Aurea Tamami Minagawa Toriyama⁴ 

Maria de La Ó Ramallo Veríssimo⁴ 

¹Universidade de Santo Amaro. São Paulo, Brasil.

²Universidade de São Paulo, Escola de Enfermagem de Ribeirão Preto. Ribeirão Preto, São Paulo, Brasil.

³Universidade Federal do Paraná. Curitiba, Paraná, Brasil.

⁴Universidade de São Paulo, Escola de Enfermagem. São Paulo, São Paulo, Brasil.

ABSTRACT

Objective: to synthesize factors related to dysfunctions in the socioemotional development of infants.

Method: integrative review carried out between April and August 2016 with defined criteria for inclusion and exclusion of studies, search strategies, extraction and synthesis of data. The exposure factors underwent categorical thematic analysis and systematization according to the levels of the context (Microsystem, Mesosystem, Exosystem and Macrosystem) of the Bioecological Model of Human Development.

Results: in the context of the Microsystem and Mesosystem, the factors found were: limitations in care; adversities in family relationships and in the social support and illness situation of the caregivers that influence the proximal processes. In the Exosystem and the Macrosystem, they were: social vulnerabilities of caregivers and fragilities of public policies that determine the material and social conditions of the family.

Conclusion: the synthesis of evidence on exposure factors favors the construction of measurement scales of the contextual elements related to the social emotional development of young children. Beyond the milestones, present or not, in the evaluation of a child, these technologies can be predictive, with great potential of anticipation of the factors of exposure and prevention of developmental dysfunctions.

DESCRIPTORS: Infant. Child development. Developmental Disabilities. Child development disorders, pervasive. Pediatric nursing.

HOW CITED: Silva DI, Mello DF, Mazza VA, Toriyama ATM, Veríssimo MLÓR. Dysfunctions in the socio emotional development of infants and its related factors: an integrative review. Texto Contexto Enferm [Internet]. 2019 [cited YEAR MONTH DAY]; 28:e20170370. Available from: <http://dx.doi.org/10.1590/1980-265X-TCE-2017-0370>

DISFUNÇÕES NO DESENVOLVIMENTO SOCIOEMOCIONAL DE LACTENTES E SEUS FATORES RELACIONADOS: UMA REVISÃO INTEGRATIVA

RESUMO

Objetivo: sintetizar os fatores relacionados às disfunções no desenvolvimento socioemocional dos lactentes.

Método: revisão integrativa realizada entre abril e agosto de 2016 com critérios definidos de inclusão e exclusão dos estudos, estratégias de busca, extração e síntese dos dados. Os fatores de exposição sofreram análise temática categorial e sistematização segundo os níveis do contexto (Microsistema, Mesossistema, Exossistema e Macrossistema) do Modelo Bioecológico de Desenvolvimento Humano.

Resultados: no contexto do Microsistema e Mesossistema, os fatores encontrados foram: limitações no cuidado; adversidades nas relações familiares e no apoio social e situação de adoecimento dos cuidadores que influem nos processos proximais. No Exossistema e no Macrossistema, foram: vulnerabilidades sociais dos cuidadores e fragilidades das políticas públicas, que determinam as condições materiais e sociais da família.

Conclusão: a síntese de evidências sobre os fatores de exposição favorece a construção de escalas de medida dos elementos contextuais relacionados ao desenvolvimento socioemocional de crianças pequenas. Muito além dos marcos, presentes ou não, na avaliação de uma criança, essas tecnologias podem ser preditivas, com grande potencial de antecipação dos fatores de exposição e de prevenção das disfunções no desenvolvimento.

DESCRIPTORIOS: Lactente. Desenvolvimento infantil. Deficiências do desenvolvimento. Transtornos globais do desenvolvimento infantil. Enfermagem pediátrica.

DISFUNCIONES EN EL DESARROLLO SOCIOEMOCIONAL DE LACTANTES Y SUS FACTORES RELACIONADOS: UNA REVISIÓN INTEGRATIVA

RESUMEN

Objetivo: sintetizar los factores relacionados con las disfunciones en el desarrollo socioemocional de los lactantes.

Método: revisión integrativa realizada entre abril y agosto de 2016 con criterios definidos de inclusión y exclusión de los estudios, estrategias de búsqueda, extracción y síntesis de los datos. Los factores de exposición sufrieron análisis temáticos categorial y sistematización según los niveles del contexto (Microsistema, Mesosistema, Exossistema y Macrossistema) del modelo bioecológico de desarrollo humano.

Resultados: en el contexto del Microsistema y Mesosistema, los factores encontrados fueron: limitaciones en el cuidado; adversidades en las relaciones familiares y en el apoyo social y situación de enfermedad de los cuidadores que influyen en los procesos proximales. En el Exossistema y en el Macrossistema, fueron: vulnerabilidades sociales de los cuidadores y fragilidades de las políticas públicas, que determinan las condiciones materiales y sociales de la familia.

Conclusión: la síntesis de evidencias sobre los factores de exposición favorece la construcción de escalas de medida de los elementos contextuales relacionados al desarrollo socioemocional de niños pequeños. Mucho *más* allá de los marcos, presentes o no en la evaluación de un niño, esas tecnologías pueden ser predictivas, con gran potencial de anticipación de los factores de exposición y de prevención de las disfunciones en el desarrollo.

DESCRIPTORIOS: Lactante. Desarrollo infantil. Discapacidades del desarrollo. Trastornos generalizados del desarrollo infantil. Enfermería pediátrica.

INTRODUCTION

Child development can be defined as a process of continuity and change of the child's biopsychological characteristics to acquire new skills that can contribute to their survival and autonomy throughout their life.¹⁻² It is a phenomenon that can be apprehended in several interrelated domains, nominated and organized according to the diverse perspectives of the scholars' approaches.³

In this study, we adopt the concept of Bronfenbrenner and Morris² which classify development according to the intellectual, physical and social emotional skills or abilities that can manifest themselves in combination. These competencies result from complex interactions between (personal) and contextual (environmental) elements throughout the child's life and can be defined as a demonstrated acquisition through the development of knowledge, ability or capability to conduct and direct their behavior over of life.¹

Thus, socio emotional development is the process of intersection of child development in social and emotional perspectives and is related to the expression of emotion in social contexts, in the social triggers of emotional expressions, in the social construction of emotional experience and understanding, in the social ramifications of social reactions, and the effects of emotion on social behavior.⁴

There is a theoretical convergence that infants have common patterns of socioemotional development. However, it is also understood that since the end of the neonatal period, they have distinct personalities and reactions, reflecting both their biopsychological and environmental characteristics, the child's interactions or their social relationships.^{2,4} Emotions, temperament and confidence are basic foundations of socioemotional development, which will outline the infant's early experiences with the parents and the infant's skills acquisition in this area.⁴ From these psychosocial foundations, the social-emotional development can be apprehended by the evaluation of developmental milestones from the following domains: attachment, social competence, emotional competence and self-perception.⁵

Socio emotional development is closely linked to the physical development of the brain and the interactions or proximal processes experienced by the infant from birth.^{2,6} There is evidence of the influence of neurological maturation on the socioemotional development of the infant, which are related to physiological events.⁷ Small child development, specifically the socio emotional domain, is largely conditioned by context-related exposure factors and care received from caregivers, which demonstrate the child's vulnerability to socio emotional dysfunction.⁸

This study assumes that knowledge of these exposure factors can guide the construction of health technologies that promote social-emotional care and development,⁸ by the strengthening of the proximal processes, which are the specific forms of interaction between the child and their environment.¹⁻²

The field of socio emotional development is a field of potential nurses, who regularly attend the child from birth, through consultations, health education actions, home visits, which require the construction of ties with caregivers.⁸ However, the technologies available for monitoring child development, such as scales based on marks and objective signs, are based on the child's abilities, but may consider little the contexts that condition their development process.⁵

Nurses can use instruments that identify the vulnerability conditions of infants to be harmed to propose interventions that strengthen the protection, stimulation, care and construction of bonds with the child^{3,8} and that produce positive results in social-emotional development.^{2,4} Thus, the synthesis of the factors related to social-emotional development dysfunctions, proposed in this review, can help nursing professionals to monitor the socioemotional development of the infant beyond the momentary performance, and to establish assistance priorities according to their real needs in health.⁸

Thus, this study aimed to synthesize factors related to dysfunctions in the socioemotional development of infants.

METHOD

Integrative review, from the research question: “What exposure factors are related to dysfunctions in the socioemotional development of infants?” Methodological steps were followed: definition of the inclusion criteria of the studies (participants, exposure factors, outcomes and types of studies, definition of search strategies, extraction and synthesis of data), seeking the clarity and rigor required for the study.⁹

The inclusion criteria were: studies on children from zero to two years of age, as well as studies with children at preschool or school age, whose exposure to the conditioning factors occurred in the zero to two years period, and their outcome was measured afterward. We established as exposure factors: behaviors, actions and activities related to child care and contextual, socioeconomic, political and cultural issues related to care actions. Signs of dysfunction in social-emotional development were selected as outcomes, through the study of attachment, social competence, emotional competence and self-perception. We included studies that adopted any evaluation of the child, such as developmental scales, or other tests or specific evaluations that allow diagnosis or classification of social-emotional dysfunction only.

The types of studies in the final sample were original observational longitudinal studies of *cohort* or case-control, or transverse; quasi-experimental, or qualitative exploratory, theoretical, ethnographic, action-research, or case study.

The research, carried out between April and August 2016, had as strategies: studies published in English, Portuguese and Spanish; in the period 2011-2015 (five years retrospective); in the bases or portals: PubMed (US National Library of Medicine National Institutes Database Search of Health); CINAHL (Cumulative Index to Nursing and Allied Health Literature); LILACS (Latin-American and Caribbean Center on Health Sciences Information); Web of Science; Scopus; ERIC (Education Resources Information Center) and PsycNET.

To guarantee the most focal and specific search, considering the need to identify the exposure factors, the following keywords were used: [“emotional development” OR “emotional and social development” OR “social-emotional development” OR “socioemotional development”]. Each database or portal had its search strategy established and validated by a librarian.

The articles selected after applying the inclusion and exclusion criteria, by reading the abstracts, were read in full. The data extracted from the articles were organized in a spreadsheet with information such as: the age of the participant, classification of the participant according to the *Medical Subject Headings* (MeSH), the exposure factor(s) found; and outcome(s): domains of socioemotional development (DSE),⁵ reference number, database/portal, location in the database, year of publication, reference, type of study, purpose and nature of the study.

For the data synthesis, the exposure factors were submitted to the categorical thematic analysis¹⁰ and systematized according to the context levels (Microsystem, Mesosystem, Exosystem and Macrosystem) described in the Bioecological Model of Human Development.¹⁻² Thus, the categories were elaborated from the data and reflect the factors that condition the socioemotional development of the infant. These are: limitations in care; adversities in family relationships and in the social support and care situation of caregivers, which are presented in the Microsystem and Mesosystem; social vulnerabilities of caregivers, and weaknesses in policies and programs that are in the Exosystem and the Macrosystem.²

RESULTS

In the initial search, 652 articles were identified, which were tabulated in the Endnote® platform. This tabulation allowed to eliminate 111 articles repeated in more than one database/portal, remaining 541 articles for the floating reading of titles and abstracts. In this reading, 429 articles were excluded, which did not include defined inclusion criteria. Thus, the final sample of articles included for data extraction was 109 articles. The results of this methodological step are detailed in Table 1.

Table 1 - Number of articles retrieved, excluded by repetition and by floating reading, and included in the final sample for data extraction. São Paulo, SP, 2016. (n=652)

Database / Portal	Articles initially retrieved	Articles without repetition	Deleted articles after floating reading	Final sample	References
CINAHL	26	19	13	6	11-16
ERIC	77	74	65	9	17-25
LILACS	5	5	4	1	26
PsycNET	59	59	57	2	27-28
PubMed	104	104	62	42	29-70
SCOPUS	309	232	206	26	71-96
Web of Science	72	48	25	23	97-119
Total articles	652	541	429	109	

Table 2 shows the distribution of the studies according to their purpose and methodological nature. Most studies are quantitative in nature and longitudinal and cross-sectional observational studies.

Table 2 - Distribution and indication of the bibliographic references of the studies included in the final sample, according to the type. São Paulo, SP, 2016. (n=109)

Type of study	Articles n	References
Longitudinal observational	54	12-14,16,21, 23-25, 30-31, 34-35, 41-43, 46-48, 50-53, 55-58, 61-62, 69-70,74,76,79,82, 85-86, 89-91, 93-95, 97-100, 106-108,110,113,115, 118-119
Transverse observational	25	19-20,22,26, 28-29,32, 36-37, 39-40, 44-45,49,60,67,73, 80-81,84,88,96,102, 116-117
Theoretical	13	17,33,38,54,66,68,75,77,83,87,101,109,111
Experimental	12	59, 63-65, 71-72,78,92,103-104,112, 114
Descriptive	3	11,15, 18
Methodological	1	105
Almost experimental	1	27
Total	109	

Table 3 presents the profile of study participants and shows that most of the investigations focused on the measurement of outcomes in children under five years of age. However, many studies have measured their outcomes until adolescence.

Table 3 - Distribution of the studies included in the final sample according to the participants and classified according to o Medical Subject Headings (MeSH). São Paulo, SP, 2016.

Participants	Articles n	References
Newborns (0-28 days)	1	32
Infants (1 month - 2 years old)	39	12, 14-15,30, 33-35, 37-40,43,46, 48-49, 53-54, 57-59,61, 63-64, 66-69,78-79,81,84,86,90-94, 118-119
Infants/preschoolers (1 month - 5 years old)*	30	11,16, 20-22,25,31,36, 41-42, 44-45,47, 50-52,55,62,65, 71-74,76, 100-101, 108-110, 113
Infants/preschoolers/schoolers*	20	17-18,23,26,60,75,77,80, 82-83, 87-88, 97-99,103, 105-107, 111
Preschoolers (2 years old - 5 years old)*	16	13,19,24, 27-29,56,70, 95-96,102,112, 114-117
Preschoolers/schoolers (2 years old - 12 years old)*	1	85
Preschoolers/schoolers/teens (2 years old - 17 years old)*	1	89
Schoolers (6 years old - 12 years old)*	1	104
Total	109	

* Studies evaluating the outcome in a period after the infancy (greater than two years). However, the exposure occurred before two years old.

In Table 4, the outcomes investigated in the studies included in the final sample are the groupings performed.⁵ The results show that, most of the studies are focused on investigates the social and emotional competence outcomes, and the most studied domains of socioemotional development.

Table 4 - Distribution of the studies included in the final sample, according to the outcomes.
São Paulo, SP, 2016.

Outcomes	Articles n	References
Social competence / Emotional competence	76	11-25,27,32,35, 38-39, 42-45, 47-48,50-51, 53-54, 56-59, 62-66, 68-81,84, 87-89, 94-96, 98-108,111, 113-115, 118
Emotional competence	18	28-29,31,33,37,49, 60-61,67,82, 85-86,91,97,110,112, 116-117
Social competence	5	26,30,36,41, 55
Self-perception	5	34,40,46,52, 90
Bond	2	92-93
Bonding / Emotional competence	2	109, 119
Bonding / Emotional competence / Social competence	1	83
Total	109	

The full reading of the included articles allowed the extraction of the exposure factors that were categorized and systematized according to the context levels, according to the Bioecological Model. Within the context of the microsystem and mesosystem, the factors related to the behavior and biopsychosocial conditions of the child's caregivers are present.

The category "Limitations in Care" refers to the caregiver's actions toward the child regarding their protection, interaction, and affectionate relationships. In this category, the exposure factors were: Difficulties in interacting with the child,^{13,15-16,18,20,27,32,35,38,53,55,67,75-76,81,86,90,93,96,101,116,119} Difficulties in meeting the socioemotional needs of the child,^{61,79,91,99} Low duration of breastfeeding,⁸¹ Attitude of overprotection towards children,²⁶ Anxiety of parents facing difficulties of the child,¹¹² Absence of caregiver affection towards the child,¹¹⁸ Negative perception of children,^{47,59} Absence of reading and learning moments with the child,^{19,108} Excessive control and regulation of parents due to cultural influence,¹¹⁰⁻¹¹¹ Authoritative posture towards the child,^{47,117} Presence of violence and abuse against children,^{47,60,68,83,113} Absence of protection against accidents^{36,42,62} and Neglect against the child,^{59,68} Adverse behavior of caregivers due to negative experiences.^{27-28,56,65,77}

The category "Caregivers' illness situation" refers to health-disease conditions that may impair the caregivers' ability to bond and provide affective relationships. In this category, the exposure factors were: presence of depression and stress of caregivers,^{14,33,36,38,56,60,67,73,75-76,78-79,94,98} schizophrenia and other mental disorders of caregivers,^{39,68,89,97} anxiety of caregivers,⁵⁹ compulsive disorders in caregivers,⁴⁰ depression and pre and postnatal stress,^{12,18,28,30,43,46,48,51-52,57,64-65,68,70,85,100,103} nutritional impairment during prenatal care³⁸ and caregivers' chemical dependence.^{15,18,36,60,97,100,106}

The category "Adversities in family relationships and social support" reveals the difficulties of the family relations experienced by the caregivers and the restrictions in the social support network that may hinder the provision of child care. In this category, the exposure factors were: separation of the child from his parents,^{68,82} family instability,^{25,74} one-parent family,^{13,29,36,50,56,80,84,89,94,97,103,108,115} non-acceptance of pregnancy,^{34,50} caretakers in detention or serving sentences,³⁶ crime/delinquency of

caregivers,^{34,60,65} marital conflict,^{49,61,68,82} presence of domestic violence against caregivers,^{17,23,34,36,58,65,80} and not adherence to prenatal care.⁵⁹

Within the context of the Exosystem and Macrosystem, the factors related to socio-cultural, socioeconomic and political-programmatic conditions that condition child care are present. The category "Social vulnerabilities of caregivers" is related to the precariousness of socioeconomic issues, which guarantee the material sustenance of the child, and inequalities in the sociocultural issues of caregivers that determine their autonomy and empowerment in child care. In this category, the exposure factors were: lack of autonomy/empowerment due to adolescent status,^{29,36,84} lack of autonomy/empowerment due to ethnic status,^{23,51,80,82,98,101–103,108,110,115} absence of fixed housing/family unit,^{22,41,45,63,109} stigmatization due to the situation of violence and/or harassment,^{28,75} situation of stress and anxiety due to the situation of war or war⁸⁸, difficulties in accessing social rights,^{21,51,54,66,87,104} difficulty in the availability of family resources,^{13,20–21,24,28–29,38,71–72,74,77,80,87,97,101–103,114} low level of schooling of caregivers,^{20,24,28–29,36,51,56,71–72,74,101–103,107} difficulties in the availability of work,^{11,13,29,36–37,56,70–72} precariousness in housing,^{36,66} contamination in housing.⁴⁴

The category "Policy and program fragilities" shows how government policies and actions are proposed and formatted to meet the needs of the child. In this category, the exposure factors were: limitations of nutritional programs,³¹ inadequate prenatal care,⁹⁵ insufficient social support and promotion programs,^{34,36,71,72,78,89,92} inadequate educational services.^{74,105}

DISCUSSION

The category "Limitations in care" represents the form and quality of care and interactions offered to the infant^{15–16,118} as well as the necessary protection by the caregivers.^{36,42,62} Care and protection within a more proximal context (Microsystem and Mesosystem), in which the human development process is triggered, directly influence the regularity in the form and duration of the proximal processes with the child, which has consequences in the results of the social-emotional development.^{1–2} It should be understood that the care and protection of family/caregivers is influenced by the local culture¹¹⁰ and of the forms of democratic organization or power in which they are inserted.⁴⁷

In the category "Caregiver's illness situation", the exposure factors express the health-disease conditions of the parents/caregivers and are characterized by the presence of psychic disorders,^{14,33,59} besides other injuries.³⁸ Such factors are indicative of insufficiency in care actions, which can provoke precariousness in the proximal processes and generate dysfunctions.²

These health conditions indicate how caregivers are able, according to their health condition, to provide quality care for the child. The presence of mental disorders is related to a lower degree of affection for the child, as well as to the building of more fragile bonds.^{33,59} Such conditions often reflect sociocultural conditions that impose on women a very large burden to bear, such as the condition of being pregnant and having to work outside, or to endure conditions of domestic violence and other adversities, such as coexistence with drug trafficking and drug addiction. Such adverse situations may cause limitations in the care and promotion of child development due to poor interaction and stimulus activities.^{87,103,120}

The category "Adversities in family relationships and support social network" refers to exposure factors characterized by issues of family adversity, lack of social support, and detention and crime situations in the context of child care. Such factors may generate a lack of support for caregivers in daily child care and lead to neglect and exposure of the infant to dangerous situations. Research in all these areas shows that significant adversity can lead to excessive activation of stress response systems, which can impair brain development. The lack of adequate context can produce stressful processes, caused by the elevation of hormones such as cortisol, in response to stress, which can damage neurodevelopment and, consequently, the social-emotional domain.⁷

In the perspective of health care, the first three categories reflect elements related to the behaviors, subjectivities and conditions of the child caregivers, which can be used by Nursing in the operationalization of interventions during the child's care.⁸ Such actions may strengthen the proximal processes when incorporated into health education of caregivers, strengthen their capacity to promote development, institutional assistance to situations of addition and articulation with the social and community network in support of child care.¹²⁰

On the other hand, in more distal contexts such as the Exosystem and the Macrosystem, exposure factors condition caregivers in the provision of care due to social, cultural and economic influences. Thus, the category "Social vulnerabilities of caregivers" shows the exposure factors characterized by situations of lack of autonomy/empowerment due to sociocultural conditions that impose stigma and oppression on caregivers, and the socioeconomic conditions that determine the material conditions of the family.^{3,8}

Sociocultural conditions are more relevant in influencing social-emotional development, as they delineate a set of beliefs, values, goals, attitudes and activities that guide the way a group of people lives, which determines the forms of care offered to women children.¹²¹ Socioeconomic conditions directly affect socio emotional development, as growth in poverty exposes the child to poor sanitation, overcrowded housing, malnutrition or malnutrition, lack of psychosocial stimulation, and precarious household resources.³ In this way, the social insertion of the family directly affects the conditions of providing the child's material sustenance and attending to his needs.⁸

The category "Policy and program fragilities" shows exposure factors related to insufficient programs to meet the needs of children. These shortcomings are characterized by precarious working conditions of the health teams, with a low supply of human resources and inadequate facilities for child care.⁸ An inadequate supply of services for the care of the child, such as health and education, undermines the social promotion and empowerment of his family, which due to the presence of poverty, fails to provide the adequate care that is necessary for a socio emotional development appropriate. Therefore, this political commitment demands the establishment of pacts and commitments of governments to promote early childhood development through educational, social and health policies.^{3,8}

Health care is directed to subjects and communities, being carried out by professionals in their singularity. Thus, the last two categories demonstrate elements of a contextual and political nature that are far removed from the nursing team's resolving capacity.^{8,11} Thus, nurses must articulate their actions in the perspective of intersectionality and multidisciplinary,¹²² that allows a shared care with other social equipment of care to the children and families that can strengthen the care and the promotion of the social-emotional development.⁷

Thus, the exposure factors synthesized and their relationships with the socioemotional development of the infant can be observed in Figure 1, which shows the influence on the proximal process in the Microsystem, Mesosystem, Exosystem and Macrosystem contexts:

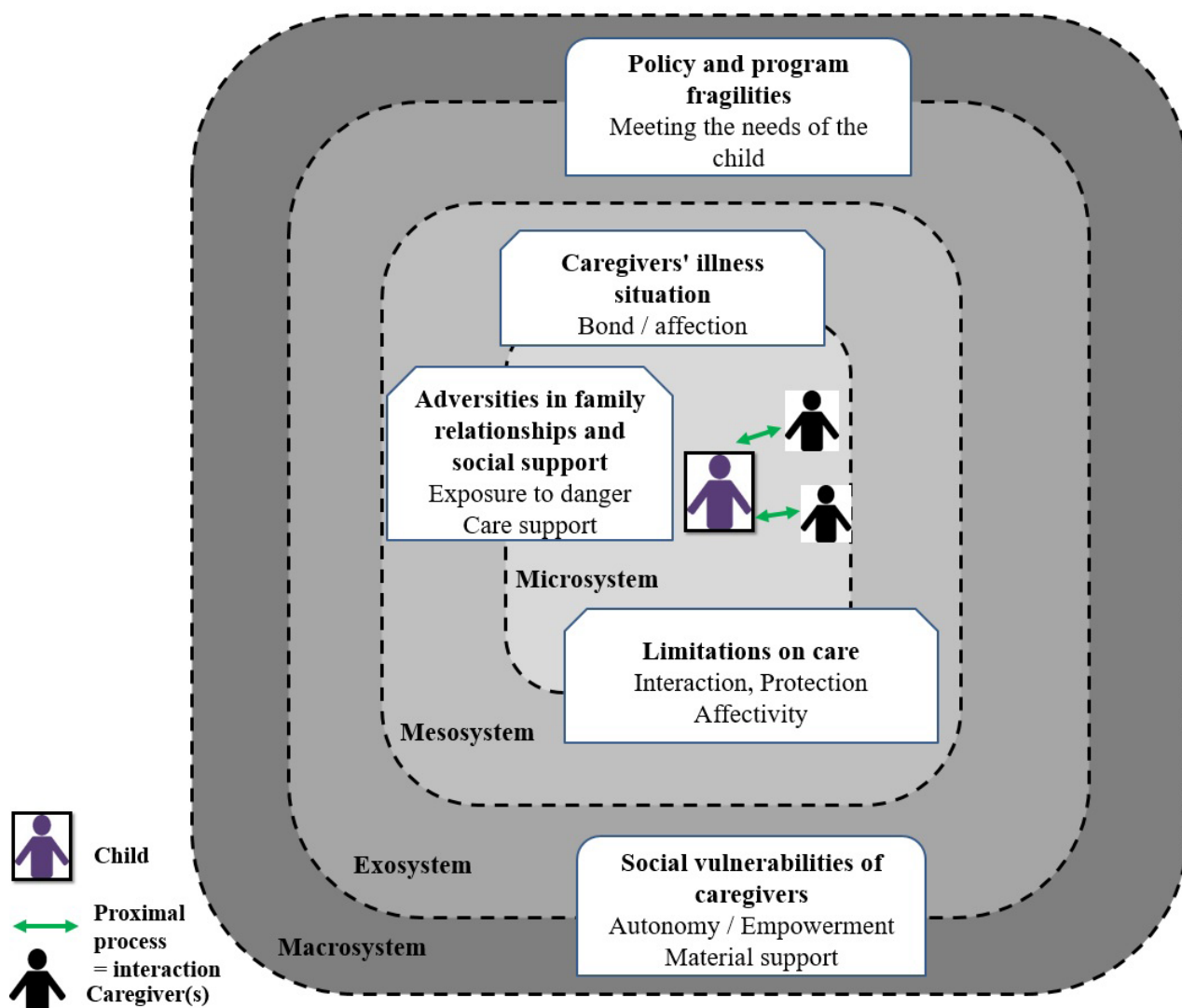


Figure 1 - Categories of the exposure factors synthesized and their influence on the proximal process and socioemotional development, according to the contexts of the Bioecological Model of Human Development. Graphical representation based on the theoretical model presented. São Paulo, SP, 2017.¹⁻²

CONCLUSION

The present study showed that the dysfunctions in the socioemotional development of infants are conditioned by the contexts of care, strongly expressed in the proximal processes, particularly related to the limitations in the care, in the situations of caregivers' illness, and by the adversities in family relations and social support that influence in interactions with the young child. Caregivers are influenced by social vulnerabilities and the weaknesses of public policies, which determine the material and social conditions in the provision of care.

The exposure factors listed in this review allowed a synthesis of the adverse situations for early childhood in the world, as it included studies developed in diverse cultural, social and political contexts. The synthesis of evidence on the exposure factors allows the design of care models based on the child's real health needs and operationalized by care technologies that can resolve the strength of the exposure factors, reduce the vulnerability of infants and prevent developmental dysfunctions

social-emotional. Among these technologies, it is proposed the construction of scales to measure the contextual elements related to the social-emotional development of young children. Beyond the milestones present or not in the evaluation of a child, these technologies can be predictive, with great potential of anticipation of the factors of exposure and prevention of developmental dysfunctions.

From a bioecological perspective for child development in the context of the Macrosystem, the study points to the urgency of social and political responses that prioritize early childhood and the development of young children as a primary right. Nonetheless, it warns of humanitarian obstacles arising from contemporary macro-structural changes, setbacks in social relations, economic instability, resistance and intolerance to cultural diversity, and suppression of rights, which determine the increase in family and child vulnerability. Given this framework, the challenges are imminent for the promotion of human development, particularly the socio emotional development of young children.

Thereafter, the theoretical contribution of the Bioecological Model of Human Development offers a conceptual framework relevant to the understanding of social relations and adversities of contexts. Thus, it is an expressive theoretical reference for the field of health and nursing, with an approach which contributes to broadening the understanding needs of children, families and communities. -

REFERENCES

1. Bronfenbrenner U, Evans GW. Developmental science in the 21st century: Emerging questions, theoretical models, research designs and empirical findings. *Soc Dev [Internet]*. 2000 Feb [cited 2016 Dec 02]; 9(1):115-25. Available from: <https://dx.doi.org/10.1111/1467-9507.00114>
2. Bronfenbrenner U, Morris PA. The Bioecological Model of Human Development. In: Damons W, Lerner RM, eds. *Handbook of child psychology*. 6th ed. New York: Wiley; 2006:793-828.
3. Walker SP, Wachs TD, Grantham-McGregor S, Black MM, Nelson CA, Huffman SL, et al. Inequality in early childhood: risk and protective factors for early child development. *Lancet [Internet]*. 2011 Sep [cited 2016 Dec 02]; 378(9799):1325-38. Available from: [https://dx.doi.org/10.1016/S0140-6736\(11\)60555-2](https://dx.doi.org/10.1016/S0140-6736(11)60555-2)
4. Thompson RA. Doing it with feeling: The emotion in early socioemotional development. *Emot Rev [Internet]*. 2015 Apr [cited 2016 Dec 03]; 7(1):121-5. Available from: <https://dx.doi.org/10.1177/1754073914554777>
5. Denham S, Wyatt T, Bassett H, Echeverria D, Knox S. Assessing social-emotional development in children from a longitudinal perspective. *J Epidemiol Community Health [Internet]*. 2009 Jan [cited 2016 Dec 03]; 63(Suppl 1):i37-i52. Available from: <https://dx.doi.org/10.1136/jech.2007.070797>
6. Thompson RA. Development in the first years of life. *Future Child [Internet]*. 2001 Apr-Jun [cited 2016 Dec 03]; 11(1):21-33. Available from: <https://dx.doi.org/10.2307/1602807>
7. Shonkoff JP. Protecting brains, not simply stimulating minds. *Science [Internet]*. 2011 Aug [cited 2016 Dec 11]; 333(6045):982-83. Available from: <https://dx.doi.org/10.1126/science.1206014>
8. Silva DI, Chiesa AM, Veríssimo MLOR, Mazza VA. Vulnerability of children in adverse situations to their development: proposed analytical matrix. *Rev Esc Enferm USP [Internet]*. 2013 Dec [cited 2016 Nov 15]; 47(6):1397-402. Available from: <https://dx.doi.org/10.1590/S0080-623420130000600021>
9. Ganong LH. Integrative reviews of nursing research. *Res Nurs Health [Internet]*. 1987 Feb [cited 2016 Dec 05]; 10(1):1-11. Available from: <https://dx.doi.org/10.1002/nur.4770100103>
10. Bardin L. *Análise de conteúdo*. Lisboa: Edições 70;2010.
11. Ali E, Rattani S. Effects of Maternal Employment on Child's Emotional Development. *Int J Nurs Educ Scholarsh [Internet]*. 2015 Apr [cited 2016 Jun 15]; 7(2):55. Available from: <https://dx.doi.org/10.5958/0974-9357.2015.00074.4>

12. Almeida C, Sá E, Cunha F, Pires E. Common mental disorders during pregnancy and baby's development in the first year of life. *J Reprod Infant Psychol* [Internet]. 2012 Oct [cited 2016 Jun 13]; 30(4):341-51. Available from: <https://dx.doi.org/10.1080/02646838.2012.736689>
13. Guedeney A, Pingault J, Thorro A, Larroque B. Social withdrawal at 1 year is associated with emotional and behavioural problems at 3 and 5 years: the Eden mother-child cohort study. *Eur Child Adolesc Psychiatry* [Internet]. 2014 Jan [cited 2016 Jun 13]; 23(12):1181-8. Available from: <https://dx.doi.org/10.1007/s00787-013-0513-8>
14. Mason Z, Briggs R, Silver E. Maternal attachment feelings mediate between maternal reports of depression, infant social-emotional development, and parenting stress. *J Reprod Infant Psychol* [Internet]. 2011 Nov [cited 2016 Jun 13]; 29(4):382-94. Available from: <https://dx.doi.org/10.1080/02646838.2011.629994>
15. Nash J. Maternal Sensitivity in Mother-Infant Interactions for Infants with and without Prenatal Alcohol Exposure [Doctor of Philosophy]. University of Washington; [Internet]. 2013 Jul [cited 2016 Jun 14]. Available from: <http://hdl.handle.net/1773/23370>
16. Popp T, Wilcox M. Capturing the Complexity of Parent-Provider Relationships in Early Intervention. *Infants Young Child* [Internet]. 2012 Jul-Sep [cited 2016 Jun 14]; 25(3):213-31. Available from: <https://dx.doi.org/10.1097/IYC.0b013e318258c63a>
17. Olusegun E. Domestic violence, risky family environment and children: A bio-psychology perspective. *Int J Psychol Couns* [Internet]. 2014 Sep [cited 2016 Jun 15]; 6(8):107-18. Available from: <https://dx.doi.org/10.5897/IJPC2014.0275>
18. Aubrey C, Ward K. Early years practitioners' views on early personal, social and emotional development. *Emotional and Behavioural Difficulties* [Internet]. 2013 Jun [cited 2016 Jun 15]; 18(4):435-47. Available from: <https://dx.doi.org/10.1080/13632752.2013.807541>
19. Betawi I. What effect does story time have on toddlers' social and emotional skills? *Early Child Dev Care* [Internet]. 2014 Set [cited 2016 Jun 15]; 185(4):594-600. Available from: <https://dx.doi.org/10.1080/03004430.2014.943756>
20. Bornstein M, Putnick D. Cognitive and socioemotional caregiving in developing countries. *Child Dev* [Internet]. 2012 Jan [cited 2016 Jun 15]; 83(1):46-61. Available from: <https://dx.doi.org/10.1111/j.1467-8624.2011.01673.x>
21. Claessens A. Kindergarten child care experiences and child achievement and socioemotional skills. *Early Child Res Q* [Internet]. 2012 Jul [cited 2016 Jun 16]; 27(3):365-75. Available from: <https://dx.doi.org/10.1016/j.ecresq.2011.12.005>
22. Haskett M, Armstrong J, Tisdale J. Developmental status and social-emotional functioning of young children experiencing homelessness. *Early Child Educ J*. [Internet]. 2015 Feb [cited 2016 Jun 16]; 44(2):119-25. Available from: <https://dx.doi.org/10.1007/s10643-015-0691-8>
23. Holmes M. The sleeper effect of intimate partner violence exposure: long-term consequences on young children's aggressive behavior. *J Child Psychol Psychiatr* [Internet]. 2013 Mar [cited 2016 Jun 15]; 54(9):986-95. Available from: <https://dx.doi.org/10.1111/jcpp.12071>
24. Kochanska G, Kim S. Difficult temperament moderates links between maternal responsiveness and children's compliance and behavior problems in low-income families. *J Child Psychol Psychiatr* [Internet]. 2012 Oct [cited 2016 Jun 16]; 54(3):323-32. Available from: <https://dx.doi.org/10.1111/jcpp.12002>
25. Wu J, Chiang T. Family structure transitions and early childhood development in Taiwan: Evidence from a population-based birth cohort study. *Int J Behav Dev* [Internet]. 2014 Aug [cited 2016 Jun 16]; 39(3):275-84. Available from: <https://dx.doi.org/10.1177/0165025414544230>

26. Silva M, Airolidi M. A influência do familiar na aquisição de habilidades funcionais da criança com deficiência visual. *Rev Ter Ocup Univ São Paulo*. [Internet]. 2014 Jan-Apr [cited 2016 Jun 15];25(1):36. Available from: <https://dx.doi.org/10.11606/issn.2238-6149.v25i1p36-42>
27. Briggs R, Silver E, Krug L, Mason Z, Schrag R, Chinitz S, et al. Healthy Steps as a moderator: the impact of maternal trauma on child social-emotional development. *Clin Pract Pediatr Psychol* [Internet]. 2014 Jun [cited 2016 Jun 16]; 2(2):166-75. Available from: <https://dx.doi.org/10.1037/cpp0000060>
28. Brown J, Barbarin O, Scott K. Socioemotional trajectories in Black boys between kindergarten and the fifth grade: the role of cognitive skills and family in promoting resiliency. *Am J Orthopsychiatry* [Internet]. 2013 Apr [cited 2016 Jun 20]; 83(2-3):176-84. Available from: <https://dx.doi.org/10.1111/ajop.12027>
29. Brophy-Herb H, Bocknek E, Vallotton C, Stansbury K, Senehi N, Dalimonte-Merckling D, et al. Toddlers with early behavioral problems at higher family demographic risk benefit the most from maternal emotion talk. *J Dev Behav Pediatr* [Internet]. 2015 Sep [cited 2016 Jun 20]; 36(7):512-20. Available from: <http://journals.lww.com/jrnldb/pages/articleviewer.aspx?year=2015&issue=09000&article=00005&type=abstract>
30. Rothenberger S, Resch F, Doszpod N, Moehler E. Prenatal stress and infant affective reactivity at five months of age. *Early Hum Dev* [Internet]. 2011 Feb [cited 2016 Jun 21]; 87(2):129-36. Available from: <https://dx.doi.org/10.1016/j.earlhumdev.2010.11.014>
31. Chang S, Wang L, Wang Y, Brouwer I, Kok F, Lozoff B, et al. Iron-deficiency anemia in infancy and social emotional development in preschool-aged chinese children. *Pediatrics* [Internet]. 2011 Apr [cited 2016 Jun 21]; 127(4):e927-33. Available from: <https://dx.doi.org/10.1542/peds.2010-1659>
32. Kim P, Feldman R, Mayes L, Eicher V, Thompson N, Leckman J, et al. Breastfeeding, brain activation to own infant cry, and maternal sensitivity. *J Child Psychol Psychiatr* [Internet]. 2011 Apr [cited 2016 Jun 22]; 52(8):907-15. Available from: <https://dx.doi.org/10.1111/j.1469-7610.2011.02406.x>
33. Shah P, Muzik M, Rosenblum K. Optimizing the early parent-child relationship: windows of opportunity for parents and pediatricians. *Curr Probl Pediatr Adolesc Health Care* [Internet]. 2011 Aug [cited 2016 Jun 22]; 41(7):183-7. Available from: <https://dx.doi.org/10.1016/j.cppeds.2011.02.002>
34. Pitzer M, Jennen-Steinmetz C, Esser G, Schmidt M, Laucht M. Prediction of preadolescent depressive symptoms from child temperament, maternal distress, and gender: results of a prospective, observacional longitudinal study. *J Dev Behav Pediatr*. 2011; 32(1):18-26.
35. Pearson R, Heron J, Melotti R, Joinson C, Stein A, Ramchandani P, et al. The association between observed non-verbal maternal responses at 12 months and later infant development at 18 months and IQ at 4 years: A Observacional longitudinal study. *Infant Behav Dev* [Internet]. 2011 Dec [cited 2016 Jun 20]; 34(4):525-33. Available from: <https://dx.doi.org/10.1016/j.infbeh.2011.07.003>
36. Weitzman C, Edmonds D, Davagnino J, Briggs-Gowan M. The association between parent worry and young children's social-emotional functioning. *J Dev Behav Pediatr* [Internet]. 2011 Nov-Dec [cited 2016 Jun 21]; 32(9):660-7. Available from: <https://dx.doi.org/10.1097/DBP.0b013e31822bc76b>
37. Koutra K, Chatzi L, Roumeliotaki T, Vassilaki M, Giannakopoulou E, Batsos C, et al. Socio-demographic determinants of infant neurodevelopment at 18 months of age: Mother-Child Cohort (Rhea Study) in Crete, Greece. *Infant Behav Dev* [Internet]. 2012 Feb [cited 2016 Jun 20]; 35(1):48-59. Available from: <https://dx.doi.org/10.1016/j.infbeh.2011.09.005>
38. Black M, Quigg A, Hurley K, Pepper M. Iron deficiency and iron-deficiency anemia in the first two years of life: strategies to prevent loss of developmental potential. *Nutr Rev* [Internet]. 2011 Oct [cited 2016 Jun 22]; 69: S64-S70. Available from: <https://dx.doi.org/10.1111/j.1753-4887.2011.00435.x>

39. Conroy S, Pariante C, Marks M, Davies H, Farrelly S, Schacht R et al. Maternal psychopathology and infant development at 18 months: the impact of maternal personality disorder and depression. *J Am Acad Child Adolesc Psychiatry* [Internet]. 2012 Jan [cited 2016 Jun 22]; 51(1):51-61. Available from: <https://dx.doi.org/10.1016/j.jaac.2011.10.007>
40. Zerwas S, Von Holle A, Torgersen L, Reichborn-Kjennerud T, Stoltenberg C, Bulik C. Maternal eating disorders and infant temperament: Findings from the norwegian mother and child cohort study. *Int J Eat Disord* [Internet]. 2012 Jan [cited 2016 Jun 22]; 45(4):546-55. Available from: <https://dx.doi.org/10.1002/eat.20983>
41. Garvin M, Tarullo A, Van Ryzin M, Gunnar M. Postadoption parenting and socioemotional development in postinstitutionalized children. *Dev Psychopathol* [Internet]. 2012 Jan [cited 2016 Jun 22]; 24(1):35-48. Available from: <https://dx.doi.org/10.1017/S0954579411000642>
42. Kaldoja M, Kolk A. Social-emotional behaviour in infants and toddlers with mild traumatic brain injury. *Brain Inj* [Internet]. 2012 Feb [cited 2016 Jun 23]; 26(7-8):1005-13. Available from: <https://dx.doi.org/10.3109/02699052.2012.660516>
43. Maas A, Vreeswijk C, Cock E, Rijk C, Van Bakel H. "Expectant Parents": study protocol of a Observational longitudinal study concerning prenatal (risk) factors and postnatal infant development, parenting, and parent-infant relationships. *BMC Pregnancy Childbirth* [Internet]. 2012 Jun [cited 2016 Jun 23]; 12(1):46. Available from: <https://dx.doi.org/10.1186/1471-2393-12-46>
44. Hoffman K, Adgent M, Goldman B, Sjödin A, Daniels J. Lactational Exposure to Polybrominated Diphenyl Ethers and Its Relation to Social and Emotional Development among Toddlers. *Environ Health Perspect* [Internet]. 2012 Available from: <https://dx.doi.org/10.1289/ehp.1205100>
45. Kroupina M, Fuglestad A, Iverson S, Himes J, Mason P, Gunnar M et al. Adoption as an intervention for institutionally reared children: HPA functioning and developmental status. *Infant Behav Dev* [Internet]. 2012 Dec [cited 2016 Jun 23]; 35(4):829-37. Available from: <https://dx.doi.org/10.1016/j.infbeh.2012.07.011>
46. Baibazarova E, Van de Beek C, Cohen-Kettenis P, Buitelaar J, Shelton K, van Goozen S. Influence of prenatal maternal stress, maternal plasma cortisol and cortisol in the amniotic fluid on birth outcomes and child temperament at 3 months. *Psychoneuroendocrinology* [Internet]. 2013 Jun [cited 2016 Jun 23]; 38(6):907-15. Available from: <https://dx.doi.org/10.1016/j.psyneuen.2012.09.015>
47. Aracena M, Krause M, Pérez J, Bedregal P, Undurraga C, Alamo N. Efectos de mediano plazo de un programa de intervención para madres adolescentes. *Aten Primaria* [Internet]. 2013 Mar [cited 2016 Jun 23]; 45(3):157-64. Available from: <https://dx.doi.org/10.1016/j.aprim.2012.09.017>
48. Koutra K, Chatzi L, Bagkeris M, Vassilaki M, Bitsios P, Kogevinas M. Antenatal and postnatal maternal mental health as determinants of infant neurodevelopment at 18 months of age in a mother–child cohort (Rhea Study) in Crete, Greece. *Soc Psychiatry Psychiatr Epidemiol* [Internet]. 2012 Dec [cited 2016 Jun 23]; 48(8):1335-45. Available from: <https://dx.doi.org/10.1007/s00127-012-0636-0>
49. Graham A, Fisher P, Pfeifer J. What sleeping babies hear: a functional MRI study of interparental conflict and infants' emotion processing. *Psychol Sci* [Internet]. 2013 Mar [cited 2016 Jun 23]; 24(5):782-9. Available from: <https://dx.doi.org/10.1177/0956797612458803>
50. Saleem H, Surkan P. Parental pregnancy wantedness and child social-emotional development. *Matern Child Health J* [Internet]. 2013 Jun [cited 2016 Jun 23]; 18(4):930-8. Available from: <https://dx.doi.org/10.1007/s10995-013-1320-z>
51. Palmer F, Anand K, Graff J, Murphy L, Qu Y, Völgyi E et al. Early adversity, socioemotional development, and stress in urban 1-year-old children. *J Pediatr* [Internet]. 2013 Dec [cited 2016 Jun 23]; 163(6):1733-9. Available from: <https://dx.doi.org/10.1016/j.jpeds.2013.08.030>

52. Forssman L, Peltola M, Yrttiaho S, Puura K, Mononen N, Lehtimäki T et al. Regulatory variant of the TPH2 gene and early life stress are associated with heightened attention to social signals of fear in infants. *J Child Psychol Psychiatr* [Internet]. 2013 Dec [cited 2016 Jun 23]; 55(7):793-801. Available from: <https://dx.doi.org/10.1111/jcpp.12181>
53. Mendes DSeidl-de-Moura M. Different Kinds of Infants' Smiles in the First Six Months and Contingency to Maternal Affective Behavior. *Span J Psychol* [Internet]. 2014 Nov [cited 2016 Jun 23]; 17:e80. Available from: <https://dx.doi.org/10.1017/sjp.2014.86>
54. Alderman H, Behrman J, Grantham-McGregor S, Lopez-Boo F, Urzua S. Economic perspectives on integrating early child stimulation with nutritional interventions. *Ann NY Acad Sci* [Internet]. 2014 Jan [cited 2016 Jun 24]; 1308(1):129-38. Available from: <https://dx.doi.org/10.1111/nyas.12331>
55. Cuevas K, Deater-Deckard K, Kim-Spoon J, Watson A, Morasch K, Bell M. What's mom got to do with it? Contributions of maternal executive function and caregiving to the development of executive function across early childhood. *Dev Sci* [Internet]. 2014 Jan [cited 2016 Jun 24]; 17(2):224-38. Available from: <https://dx.doi.org/10.1111/desc.12073>
56. Huhtala M, Korja R, Lehtonen L, Haataja L, Lapinleimu H, Rautava P. Associations between parental psychological well-being and socio emotional development in 5-year-old preterm children. *Early Hum. Dev* [Internet]. 2014 Mar [cited 2016 Jun 24]; 90(3):119-24. Available from: <https://dx.doi.org/10.1016/j.earlhumdev.2013.12.009>
57. Tran T, Biggs B, Tran T, Simpson J, Mello M, Hanieh S, et al. Perinatal common mental disorders among women and the social and emotional development of their infants in rural Vietnam. *J Affect Disord* [Internet]. 2014 May [cited 2016 Jun 24]; 160:104-12. Available from: <https://dx.doi.org/10.1016/j.jad.2013.12.034>
58. Ahlfs-Dunn SHuth-Bocks A. Intimate partner violence and infant socioemotional development: the moderating effects of maternal trauma symptoms. *Infant Ment Health* [Internet]. 2014 Jun [cited 2016 Jun 24]; 35(4):322-35. Available from: <https://dx.doi.org/10.1002/imhj.21453>
59. Pillhofer M, Spangler G, Bovenschen I, Kuenster A, Gabler S, Fallon B et al. Pilot study of a program delivered within the regular service system in Germany: Effect of a short-term attachment-based intervention on maternal sensitivity in mothers at risk for child abuse and neglect. *Child Abuse Negl* [Internet]. 2015 Apr [cited 2016 Jun 24]; 42:163-73. Available from: <https://dx.doi.org/10.1016/j.chiabu.2014.07.007>
60. Clarkson Freeman P. Prevalence and relationship between adverse childhood experiences and child behavior among young children. *Infant Ment Health J* [Internet]. 2014 Sep [cited 2016 Jun 25]; 35(6):544-54. Available from: <https://dx.doi.org/10.1002/imhj.21460>
61. Frankel L, Umemura T, Jacobvitz D, Hazen N. Marital conflict and parental responses to infant negative emotions: Relations with toddler emotional regulation. *Infant Behav Dev* [Internet]. 2015 Aug [cited 2016 Jun 25]; 40:73-83. Available from: <https://dx.doi.org/10.1016/j.infbeh.2015.03.004>
62. Kaldoja M, Kolk A. Does gender matter? Differences in social-emotional behavior among infants and toddlers before and after mild traumatic brain injury: a preliminary study. *J Child Neurol* [Internet]. 2014 Aug [cited 2016 Jun 25]; 30(7):860-7. Available from: <https://dx.doi.org/10.1177/0883073814544705>
63. Lecannelier F, Silva J, Hoffmann M, Melo R, Morales R. Effects of an intervention to promote socioemotional development in terms of attachment security: a study in early institutionalization in Chile. *Infant Ment Health J* [Internet]. 2014 Mar [cited 2016 Jun 25]; 35(2):151-9. Available from: <https://dx.doi.org/10.1002/imhj.21436>
64. Lenze S, Rodgers J, Luby J. A pilot, exploratory report on dyadic interpersonal psychotherapy for perinatal depression. *Arch Womens Ment Health* [Internet]. 2015 Jun [cited 2016 Jun 25]; 18(3):485-91. Available from: <https://dx.doi.org/10.1007/s00737-015-0503-6>

65. Muzik M, Rosenblum K, Alfafara E, Schuster M, Miller N, Waddell R, et al. Mom Power: preliminary outcomes of a group intervention to improve mental health and parenting among high-risk mothers. *Arch Womens Ment Health* [Internet]. 2015 Jun [cited 2016 Jun 25]; 18(3):507-21. Available from: <https://dx.doi.org/10.1007/s00737-014-0490-z>
66. Ngure F, Reid B, Humphrey J, Mbuya M, Peltó G, Stoltzfus R. Water, sanitation, and hygiene (WASH), environmental enteropathy, nutrition, and early child development: making the links. *Ann NY Acad Sci* [Internet]. 2014 Jan [cited 2016 Jun 25]; 1308(1):118-28. Available from: <https://dx.doi.org/10.1111/nyas.12330>
67. Noe D, Schluckwerder S, Reck C. Influence of dyadic matching of affect on infant self-regulation. *Psychopathology* [Internet]. 2015 May [cited 2016 Jun 25]; 48(3):173-83. Available from <https://dx.doi.org/10.1159/000376586>
68. Sampaio A, Lifter K. Neurosciences of infant mental health development: recent findings and implications for counseling psychology. *J Couns Psychol* [Internet]. 2014 Oct [cited 2016 Jun 25]; 61(4):513-20. Available from: <http://psycnet.apa.org/doi/10.1037/cou0000035>
69. Van Den Heuvel M, Johannes M, Henrichs J, Van den Bergh B. Maternal mindfulness during pregnancy and infant socio emotional development and temperament: the mediating role of maternal anxiety. *Early Hum Dev* [Internet]. 2015 Feb [cited 2016 Jun 25]; 91(2):103-8. Available from: <https://dx.doi.org/10.1016/j.earlhumdev.2014.12.003>
70. Woodward L, Bora S, Clark C, Montgomery-Hönger A, Pritchard V, Spencer C et al. Very preterm birth: maternal experiences of the neonatal intensive care environment. *J Perinatol* [Internet]. 2014 Jul [cited 2016 Jun 25]; 34(7):555-61. Available from: <https://dx.doi.org/10.1038/jp.2014.43>
71. Bernal R. The impact of a vocational education program for childcare providers on children's well-being. *Econ Educ Rev* [Internet]. 2015 Oct [cited 2016 Jun 25]; 48:165-83. Available from: <https://dx.doi.org/10.1016/j.econedurev.2015.07.003>
72. Bernal R, Fernández C. Subsidized childcare and child development in Colombia: Effects of "Hogares Comunitarios de Bienestar" as a function of timing and length of exposure. *Soc Sci Med* [Internet]. 2013 Nov [cited 2016 Jun 26]; 97:241-9. Available from: <https://dx.doi.org/10.1016/j.socscimed.2012.10.029>
73. Bocknek E, Brophy-Herb H, Fitzgerald H, Burns-Jager K, Carolan M. Maternal psychological absence and toddlers' social-emotional development: interpretations from the perspective of Boundary Ambiguity Theory. *Fam Proc* [Internet]. 2012 Sep [cited 2016 Jun 26]; 51(4):527-41. Available from: <https://dx.doi.org/10.1111/j.1545-5300.2012.01411.x>
74. Bratsch-Hines M, Mokrova I, Vernon-Feagans L. Child care instability from 6 to 36 months and the social adjustment of children in prekindergarten. *Early Child Res Q* [Internet]. 2015 Apr [cited 2016 Jun 26]; 30:106-16. Available from: <https://dx.doi.org/10.1016/j.ecresq.2014.09.002>
75. Cooklin A. Promoting children's resilience to parental mental illness: engaging the child's thinking. *Adv Psychiatr Treat* [Internet]. 2013 May [cited 2016 Jun 26]; 19(3):229-40. Available from: <https://dx.doi.org/10.1192/apt.bp.111.009050>
76. Fletcher R, Feeman E, Garfield C, Vimpani G. The effects of early paternal depression on children's development. *Med J Aust* [Internet]. 2011 Jan [cited 2016 Jun 26]; 195(11):685-9. Available from: <https://dx.doi.org/10.5694/mja11.10192>
77. Grinstein-Weiss M, Williams Shanks T, Beverly S. Family Assets and Child Outcomes: Evidence and Directions. *Future Child* [Internet]. 2014 Apr [cited 2016 Jun 26]; 24(1):147-70. Available from: <https://dx.doi.org/10.1353/foc.2014.0002>
78. Huang J, Sherraden M, Purnell J. Impacts of Child Development Accounts on maternal depressive symptoms: Evidence from a randomized statewide policy experiment. *Soc Sci Med*

[Internet]. 2014 Jul [cited 2016 Jun 26]; 112:30-8. Available from: <https://dx.doi.org/10.1016/j.socscimed.2014.04.023>

79. Kim P, Rigo P, Leckman J, Mayes L, Cole P, Feldman R, et al. A prospective longitudinal study of perceived infant outcomes at 18–24 months: neural and psychological correlates of parental thoughts and actions assessed during the first month postpartum. *Front Psychol* [Internet]. 2015 Nov [cited 2016 Jun 26]; 6:1772. Available from: <https://dx.doi.org/10.3389/fpsyg.2015.01772>
80. Kohrt BK, Barrueco S, Pérez CP. Domestic violence as a threat to maternal and child well-being in an urban migrant community in Peru. *Rev Panam Salud Publica*. [Internet]. 2015 May [cited 2016 Jun 26]; 37(4/5):265-72. Available from: <http://www.scielosp.org/pdf/rpsp/v37n4-5/v37n4-5a12.pdf>
81. Krol K, Rajhans P, Missana M, Grossmann T. Duration of exclusive breastfeeding is associated with differences in infants and brain responses to emotional body expressions. *Front Behav Neurosci* [Internet]. 2015 Jan [cited 2016 Jun 26]; 8:459. Available from: <https://dx.doi.org/10.3389/fnbeh.2014.00459>
82. Lee D, Mc Lanahan S. Family structure transitions and child development: instability, selection, and population heterogeneity. *Am Sociol Rev* [Internet]. 2015 Jun [cited 2016 Jun 26]; 80(4):738-63. Available from: <https://dx.doi.org/10.1177/0003122415592129>
83. Leuzinger-Bohleber M. Social emotional risk factors. *Child Indic Res*. [Internet]. 2014 Dec [cited 2016 Jun 26]; 7(4):715-34. Available from: <https://dx.doi.org/10.1007/s12187-014-9261-7>
84. Lewin A, Mitchell S, Waters D, Hodgkinson S, Southammakosane C, Gilmore J. The protective effects of father involvement for infants of teen mothers with depressive symptoms. *Matern Child Health J* [Internet]. 2014 Aug [cited 2016 Jun 26]; 19(5):1016-23. Available from: <https://doi.org/10.1007/s10995-014-1600-2>
85. Meiser S, Zietlow A, Reck C, Träuble B. The impact of postpartum depression and anxiety disorders on children's processing of facial emotional expressions at pre-school age. *Arch Womens Ment Health* [Internet]. 2015 Oct [cited 2016 Jun 26]; 18(5):707-16. Available from: <https://dx.doi.org/10.1007/s00737-015-0519-y>
86. Mills-Koonce W, Propper C, Barnett M. Poor infant soothability and later insecure-ambivalent attachment: Developmental change in phenotypic markers of risk or two measures of the same construct? *Infant Behav Dev* [Internet]. 2012 Apr [cited 2016 Jun 26]; 35(2):215-25. Available from: <https://dx.doi.org/10.1016/j.infbeh.2012.01.002>
87. Milteer R, Ginsburg K, Mulligan D. The importance of play in promoting healthy child development and maintaining strong parent-child bond: focus on children in poverty. *Pediatrics*. [Internet]. 2012 Jan [cited 2016 Jun 26]; 129(1):e204-e213. Available from: <https://dx.doi.org/10.1542/peds.2011-2953>
88. Nguyen DR, Ee J, Berry-Cabán CS, Hoedebecke K. The effects of military deployment on early child development. *US Army Med Dep J* [Internet]. 2014 Oct-Dec [cited 2016 Jun 26]; (4-14):81-6. Available from: <https://reachfamilies.umn.edu/research/document/11219>
89. Panico L, Webb E, Becares L. exploring household dynamics: the reciprocal effects of parent and child characteristics. *Longit Life Course Stud* [Internet]. 2014 Jan [cited 2016 Jun 27]; 5(1):42-55. Available from: <https://dx.doi.org/10.14301/llcs.v5i1.259>
90. Penela E, Henderson H, Hane A, Ghera M, Fox N. Maternal caregiving moderates the relation between temperamental fear and social behavior with peers. *Infancy* [Internet]. 2012 Jan [cited 2016 Jun 27]; 17(6):715-30. Available from: <https://dx.doi.org/10.1111/j.1532-7078.2012.00114.x>
91. Planalp E, Braungart-Rieker J. Trajectories of regulatory behaviors in early infancy: determinants of infant self-distraction and self-comforting. *Infancy* [Internet]. 2014 Nov [cited 2016 Jun 27]; 20(2):129-59. Available from: <https://doi.org/10.1111/infa.12068>

92. Santelices M, Guzmán G M, Aracena M, Farkas C, Armijo I, Pérez-Salas C et al. Promoting secure attachment: evaluation of the effectiveness of an early intervention pilot programme with mother-infant dyads in Santiago, Chile. *Child Care Health Dev* [Internet]. 2011 Jan [cited 2016 Jun 27]; 37(2):203-10. Available from: <https://doi.org/10.1111/j.1365-2214.2010.01161.x>
93. Schwichtenberg A, Shah P, Poehlmann J. Sleep and attachment in preterm infants. *Infant Ment Health J* [Internet]. 2013 Jan [cited 2016 Jun 27]; 34(1):37-46. Available from: <https://dx.doi.org/10.1002/imhj.21374>
94. Sierau S, Lehmann E, Jungmann T. Fathers in disadvantaged families: the importance of parental self-efficacy and partnership satisfaction for infants' development and mothers' interactive style. *Fam Sci* [Internet]. 2011 Dec [cited 2016 Jun 27]; 2(2):76-86. Available from: <https://dx.doi.org/10.1080/19424620.2011.639141>
95. Smithers L, Searle A, Chittleborough C, Scheil W, Brinkman S, Lynch J. A whole-of-population study of term and post-term gestational age at birth and children's development. *BJOG* [Internet]. 2015 Mar [cited 2016 Jun 27]; 122(10):1303-11. Available from: <https://dx.doi.org/10.1111/1471-0528.13324>
96. Zarra-Nezhad M, Kiuru N, Aunola K, Zarra-Nezhad M, Ahonen T, Poikkeus A, et al. Social withdrawal in children moderates the association between parenting styles and the children's own socioemotional development. *J Child Psychol Psychiatr* [Internet]. 2014 May [cited 2016 Jun 27]; 55(11):1260-9. Available from: <https://doi.org/10.1111/jcpp.12251>
97. Ranta J, Raitasalo K. Disorders of cognitive and emotional development in children of mothers with substance abuse and psychiatric disorders. *Nord Stud Alcohol Dr* [Internet]. 2015 Dec [cited 2016 Jun 27]; 32(6):591-604. Available from: <https://dx.doi.org/10.1515/nsad-2015-0056>
98. Bécares L, Nazroo J, Kelly Y. A longitudinal examination of maternal, family, and area-level experiences of racism on children's socioemotional development: Patterns and possible explanations. *Soc Sci Med* [Internet]. 2015 Oct [cited 2016 Jun 27]; 142:128-35. Available from: <https://doi.org/10.1016/j.socscimed.2015.08.025>
99. Matte-Gagné C, Harvey B, Stack D, Serbin L. Contextual specificity in the relationship between maternal autonomy support and children's socio emotional development: an observational longitudinal study from preschool to preadolescence. *J Youth Adolescence* [Internet]. 2015 Jan [cited 2016 Jun 27]; 44(8):1528-41. Available from: <https://dx.doi.org/10.1007/s10964-014-0247->
100. Melchior M, Hersi R, Van Der Waerden J, Larroque B, Saurel-Cubizolles M, Chollet A, et al. Maternal tobacco smoking in pregnancy and children's socio emotional development at age 5: The EDEN mother-child birth cohort study. *Eur Psychiatry* [Internet]. 2015 Jul [cited 2016 Jun 27]; 30(5):562-8. Available from: <https://dx.doi.org/10.1016/j.eurpsy.2015.03.005>
101. Mortensen J Barnett M. Teacher-child interactions in infant/toddler child care and socioemotional development. *Early Educ Dev* [Internet]. 2014 Dec [cited 2016 Jun 27]; 26(2):209-29. Available from: <https://dx.doi.org/10.1080/10409289.2015.985878>
102. McCoy D, Connors M, Morris P, Yoshikawa H, Friedman-Krauss A. Neighborhood economic disadvantage and children's cognitive and social-emotional development: Exploring Head Start classroom quality as a mediating mechanism. *Early Child Res Q* [Internet]. 2015 Jul-Sep [cited 2016 Jun 27]; 32:150-9. Available from: <https://dx.doi.org/10.1016/j.ecresq.2015.04.003>
103. Wade C. The Observacional longitudinal effects of after-school program experiences, quantity, and regulatable features on children's social-emotional development. *Child Youth Serv Rev* [Internet]. 2015 Jan [cited 2016 Jun 27]; 48:70-9. Available from: <https://dx.doi.org/10.1016/j.childyouth.2014.12.007>
104. Schonert-Reichl K, Oberle E, Lawlor M, Abbott D, Thomson K, Oberlander T, et al. Enhancing cognitive and social-emotional development through a simple-to-administer mindfulness-based

- school program for elementary school children: A randomized controlled trial. *Dev Psychol* [Internet]. 2015 Jan [cited 2016 Jun 27]; 51(1):52-66. Available from: <https://dx.doi.org/10.1037/a0038454>
105. Hestenes L, Kintner-Duffy V, Wang Y, La Paro K, Mims S, Crosby D, et al. Comparisons among quality measures in child care settings: Understanding the use of multiple measures in North Carolina's QRIS and their links to social-emotional development in preschool children. *Early Child Res Q* [Internet]. 2015 Jan-Mar [cited 2016 Jun 27]; 30:199-214. Available from: <https://dx.doi.org/10.1016/j.ecresq.2014.06.003>
 106. Niclasen J, Andersen A, Strandberg-Larsen K, Teasdale T. Is alcohol binge drinking in early and late pregnancy associated with behavioural and emotional development at age 7 years? *Eur Child Adolesc Psychiatry* [Internet]. 2014 Dec [cited 2016 Jun 27]; 23(12):1175-80. Available from: <https://dx.doi.org/10.1007/s00787-013-0511-x>
 107. Saur A, Correia S, Bettiol H, Barbieri M, Loureiro S. Variables associated with cognitive, behavioral and emotional development: a cohort of schoolchildren. *Psico-USF* [Internet]. 2014 Jan-Apr [cited 2016 Jun 27]; 19(1):131-41. Available from: <https://dx.doi.org/10.1590/S1413-82712014000100013>
 108. Baker C. Fathers' and mothers' home literacy involvement and children's cognitive and social emotional development: implications for family literacy programs. *Appl Dev Sci* [Internet]. 2013 Oct [cited 2016 Jun 27]; 17(4):184-97. Available from: <https://dx.doi.org/10.1080/10888691.2013.836034>
 109. Bakermans-Kranenburg M, Steele H, Zeanah C, Muhamedrahimov R, Vorria P, Dobrova-Krol N, et al. Attachment and emotional development in institutional care: characteristics and catch up. *Monogr Soc Res Child Dev* [Internet]. 2011 Dec [cited 2016 Jun 27]; 76(4):62-91. Available from: <https://dx.doi.org/10.1111/j.1540-5834.2011.00628.x>
 110. Bowie B, Carrere S, Cooke C, Valdivia G, McAllister B, Doohan E. The role of culture in parents' socialization of children's emotional development. *West J Nurs Res* [Internet]. 2011 Jun [cited 2016 Jun 27]; 35(4):514-33. Available from: <https://dx.doi.org/10.1177/0193945911411494>
 111. Chen X. Culture, peer interaction, and socioemotional development. *Child Dev. Perspect* [Internet]. 2011 Jun [cited 2016 Jun 27]; 6(1):27-34. Available from: <https://dx.doi.org/10.1111/j.1750-8606.2011.00187.x>
 112. Fox J, Warner C, Lerner A, Ludwig K, Ryan J, Colognori D, et al. Preventive intervention for anxious preschoolers and their parents: strengthening early emotional development. *Child Psychiatry Hum Dev* [Internet]. 2012 Feb [cited 2016 Jun 28]; 43(4):544-59. Available from: <https://dx.doi.org/10.1007/s10578-012-0283-4>
 113. Gromoske A, Maguire-Jack K. Transactional and cascading relations between early spanking and children's social-emotional development. *J Marriage Fam.* [Internet]. 2012 Sep [cited 2016 Jun 28]; 74(5):1054-68. Available from: <https://dx.doi.org/10.1111/j.1741-3737.2012.01013.x>
 114. Huang J, Sherraden M, Kim Y, Clancy M. Effects of child development accounts on early social-emotional development. *JAMA Pediatrics*. [Internet]. 2014 Mar [cited 2016 Jun 28]; 168(3):265. Available from: <https://dx.doi.org/10.1001/jamapediatrics.2013.4643>
 115. Jackson A, Preston K, Thomas C. Single mothers, nonresident fathers, and preschoolers' socioemotional development: social support, psychological well-being, and parenting quality. *J Soc Serv Res* [Internet]. 2013 Jan [cited 2016 Jun 28]; 39(1):129-40. Available from: <https://dx.doi.org/10.1080/01488376.2012.723241>
 116. Laible D. Does it matter if preschool children and mothers discuss positive vs. negative events during reminiscing? links with mother-reported attachment, family emotional climate, and socioemotional development. *Soc Dev* [Internet]. 2011 May [cited 2016 Jun 28]; 20(2):394-411. Available from: <https://dx.doi.org/10.1111/j.1467-9507.2010.00584.x>

117. Nelson J, O'Brien M, Calkins S, Leerkes E, Marcovitch S, Blankson A. Maternal expressive style and children's emotional development. *Infant Child Dev* [Internet]. 2012 May [cited 2016 Jun 28];2 1(3):267-86. Available from: <https://dx.doi.org/10.1002/icd.748>
118. Razza R, Martin A, Brooks-Gunn J. Anger and Children's Socioemotional Development: Can Parenting Elicit a Positive Side to a Negative Emotion? *J Child Fam Stud* [Internet]. 2012 Oct [cited 2016 Jun 28]; 21(5):845-56. Available from: <https://dx.doi.org/10.1007/s10826-011-9545-1>
119. Simó S, D'Ocon A. La estructura temporal de la experiencia de sensibilidad materna: su efecto sobre el desarrollo cognitivo y emocional infantil. *Infancia y Aprendizaje* [Internet]. 2011 Oct-Dec [cited 2016 Jun 28]; 34(4):481-93. Available from: <https://dx.doi.org/10.1174/021037011797898421>
120. Silva DI, Maftum MA, Mazza VA. Vulnerability in child development: influence of weak family bonds, substance abuse and domestic violence. *Texto Contexto Enferm* [Internet]. 2014 Out-Dec [cited 2016 Dec 15]; 23(4):1087-94. Available from: <https://dx.doi.org/10.1590/0104-07072014001700013>
121. Bradley RH, Corwyn RF. Caring for children around the world: A view from HOME. *Int J Behav Dev* [Internet]. 2005 Nov [cited 2016 Dec 16]; 29(6):468-78. Available from: <https://doi.org/10.1177/01650250500146925>
122. Nichiata LYI, Bertolozzi MR, Takahashi RF. The use of the "vulnerability" concept in the Nursing area. *Rev Lat Am Enfermagem* [Internet]. 2008 Sep-Oct [cited 2017 Set 23]; 16(5):923-28. Available from: <https://dx.doi.org/10.1590/S0104-11692008000500020>

NOTES

ORIGIN OF THE ARTICLE

Article extracted from the dissertation - Construction and validation of vulnerability markers of infants for dysfunctions in their socio emotional development”, presented to *Programa de Pós-graduação em Enfermagem, Escola de Enfermagem, Universidade de São Paulo*, in 2017.

CONTRIBUTION OF AUTHORITY

Study design: Silva DI, Veríssimo MLÓR.

Data collect: Silva DI.

Data analysis and interpretation: Silva DI, Veríssimo MLÓR.

Discussion of the results: Silva DI, Veríssimo MLÓR.

Writing and / or critical review of content: Silva DI, Veríssimo MLÓR, Mello DF, Mazza VA, Toriyama ATM.

Review and final approval of the final version: Silva DI, Veríssimo MLÓR, Mello DF, Mazza VA, Toriyama ATM.

CONFLICT OF INTEREST

No any conflict of interest.

HISTORICAL

Received: April 27, 2017

Approved: October 11, 2017

CORRESPONDENCE AUTHOR

Daniel Ignacio da Silva

daniel.silva1076@gmail.com

