DOI: 10.4025/jphyseduc.v27i1.2714

Review Article

THE ENVIRONMENTAL CONTEXT AND THE CHILD DEVELOPMENT: BRAZILIAN STUDIES

O CONTEXTO AMBIENTAL E O DESENVOLVIMENTO NA PRIMEIRA INFÂNCIA: ESTUDOS BRASILEIROS

Rosane Luzia de Souza Morais[1], Alysson Massote Carvalho[2] e **Lívia de Castro Magalhães[3]**

[1]Universidade Federal dos Vales do Jequitinhonha, Diamantina-MG, Brasil.
[2]Instituto Presbiteriano Gamonn, Lavras-MG, Brasil.
[3]Universidade Federal de Minas Gerais, Belo Horizonte MG, Brasil.

RESUMO
O objetivo deste estudo foi realizar revisão integrativa dos estudos brasileiros sobre a influência dos fatores ambientais no desenvolvimento global, motor e cognitivo. Procedeu-se à busca de artigos científicos nas bases SciELO e MEDLINE de 2004 a 2014, utilizando os descritores "desenvolvimento infantil", "child development" "environment" e "Brazil". Foram selecionados 38 estudos, segundo os critérios de inclusão e exclusão pré-estabelecidos. Os estudos foram desenvolvidos em diferentes regiões do Brasil e fazendo uso desde testes de triagem a diagnósticos. A maioria dos estudos estava relacionada a fatores de risco ou prevalência de atrasos. Aqueles que focaram na influência da qualidade ambiental no desenvolvimento infantil, ora analisaram o ambiente familiar, ora a creche. Conclui-se que há importante literatura para o embasamento de estudos de intervenção, ainda escassos. Além disto, há necessidade de estudos brasileiros que analisem a inter-relação dinâmica entre os ambientes vivenciados pela criança e sua influência no desenvolvimento infantil.
Palavras-chave: Desenvolvimento infantil. Ambiente sociocultural. Brasil.

ABSTRACT
The objective of this study was to make an integrative review of the brazilian studies regarding the influence of environmental factors on global, cognitive and motor development. We searched for scientific articles in SciELO and MEDLINE from 2004 to 2014 using the key words "child development" "environment" and "Brazil." According to the established criteria for inclusion and exclusion, 38 studies were selected. The studies were conducted in different regions of Brazil using techniques that varied from screening to diagnostic tests. Most studies were related to risk factors or prevalence of delays. Those studies that focused on the influence of environmental quality on child development, either analyzed the family or the day care centers. We concluded that important literature for the foundation of intervention studies. Furthermore, there is a need for studies that analyze the dynamic interrelation between the environments experienced by the child and their influence on development.
Keywords: Child development. Cultural characteristics. Brazil.

Introduction

The first years of life have been the focus of interest of researchers, professionals from different areas as well as the focus of investment in public policy today, because this is a fertile period in brain neurophysiological events. With the appropriate environmental stimuli, these events allow it to reach the development potential in the different domains: cognitive, affective, social and motor[1-2].

In the bio-ecological perspective of human development, from microsystems, i.e the child's immediate surroundings, such as living in the family or regular attendance to an educational collective environment, to elements related to the macro system, such as the culture in which the child is inserted, will influence the course of development[3]. Thus, although the influence of the environmental context in child development is a phenomenon of global concern, taking in account the differences and peculiarities within each culture[4], it is important to verify what Brazilian studies have documented on this subject.

Therefore, this study aims to carry out an integrative review of Brazilian literature on the influence of environmental factors on the development in the early years of life. Considering the complexity of the construct child development, for higher definition, we selected studies focused on the cognitive and motor areas as the research object of this work. Studies on global development - child development analyzed as a whole, without separating into different areas - were also analyzed because these studies, in some way, include the selected areas.

Methods

We first searched for Brazilian literature in the *Scientific Electronic Library Online* (SciELO) database, with descriptor in Health Sciences (DeCS), "child development", a collection of articles Brazil, 2004 to 2014. We chose a broader term, followed by title reading and abstract of each article to ensure better tracking of studies related to the topic. In order to find Brazilian articles published in international journals, we also conducted a search in the *Medical Literature, Analysis and Retrieval System Online* (MEDLINE) using the descriptors of *Medical Subject Headings* (MeSH): "child development", "environment" and "Brazil", published 2004-2014.

Inclusion criteria were: (1) studies addressing either the global, or cognitive, or motor development; (2) studies with Brazilian children, aged zero to six years, a period considered as early childhood, according to Brazilian government documents[5]; (3) children with normal development, that is, who have neither congenital nor acquired diseases that affect different areas of child development, and no biological hazards[6]; (4) articles addressing child development from an environmental perspective, i.e. taking in account the family, the school and the neighborhood environment, as well as social, economic and cultural aspects.

After assessing the titles and abstracts the selected articles in the databases, we used the following exclusion criteria: (1) studies on health and growth that did not addressed child development; (2) review studies; (3) qualitative studies, for a greater methodological definition, (4) studies within the Family Health Strategy (FHS) context, which did not directly address the ecological environments: home, daycare center, and neighborhood.

Results

582 articles were initially found at SciELO and 112 at MEDLINE. After applying the inclusion and exclusion criteria, there were 46 articles left. However, eight of them were available in both databases. Therefore, we analyzed the remaining 38 according to their main characteristics – type of study, investigated ecological environment, city/state of Brazil, studied outcome, instrument and children's. They are shown in Table 1.

Child development within the home context

The influence of the quality of the home environment and child development is the subject of some Brazilian studies[7-12]. Andrade et al.[7], measuring cognitive development, and Lamy Filho et al.[11] measuring global development, found that the higher the quality of the home environment, measured by the *Home Observation for Measurement of the Environment* (HOME) Inventory[13], the better the performance of children in the surveyed areas. Guimarães et al.[10] found a correlation between the low total score at the Inventory of *Home Environment Resources Scale* (HERS) and the delay in the global developmental of children seen at a Basic Health Unit.

Table 1. General characteristics of the Brazilian studies analyzed.

Authors	Year of Publishing	Type of Study	Ecological Environment	Cty /State	Studied outcome	Instrument Used	Age
Almeida e Valentini	2010	quasi-experimental	daycare	Porto Alegre (RS)	cognitive-motor intervention	DCCPAV	6 to 8 months/ 7 to 9 months [f]
Andrade et al.	2005	exploratory[b]	home	Salvador (BA)	Cognitive development	HOME/BAYLEY II	17 to 42 months
Baltieri et al.	2010	exploratory[b]	daycare	Piracicaba (SP)	Motor deveopment	BSID III	12 to 24 months
Barros et al.	2010	cohort[a]	home	Pelotas (RS)	Global development	BSDI versão triagem	24 months
Barros et al.	2011	exploratory[b]	daycare	Rio de Janeiro (RJ)	Global development	Medida própria qualidade creche/ cartão IPHEN	crianças creche[d]
Biscegli et al.	2007	descriptive[b]	Daycare	Catanduva (SP)	Global development	DENVER II	6 to 70 months
Brito et al.	2011	exploratory[b]	Children's education	Feira de Santana (BA)	Global development	DENVER II	4 to 5 years old
Caçola et al.	2011	exploratory[b]	Home	Piracicaba (SP)	motor development	AIMS	3 to 18 months
Campos et al.	2011	exploratory [b]	Children's education	[c] three Brazilian capitals	Readiness to school (literacy diagnosis)	ECERS-R/Provinha Brasil	Children at the 2nd grade of elementary education
Delfilipo et al.	2012	epidemiological[b]	home	Juiz de Fora (MG)	Risk factors	AHEDMD	3 to 18 months
Eickmann et al.	2009	exploratory[b]	daycare	Recife (PE)	motor/ mental development (cognitive)	BSID II	4 to 24 months
Freitas et al.	2013	exploratory[b]	home	Piracicaba (SP)/Campos dos Goytacazes (RJ)	Socioeconomic factors	AHEDMD	3 to 18 months
Guimarães et al.	2013	exploratory[b]	home	Belo Horizonte (MG)	Home environment and Global development	RAF/ Manual da AIDPI	2 to 24 months
Kobarg e Vieira	2008	descriptive exploratory[b]	home	Itajaí (SC)	Mother's beliefs on child development	CINPE versão brasileira	0 to 36 months
Lamy Filho et al.	2011	exploratory[b]	home	São Luis (MA)	Global development	HOME/ Escala de Gesell	24 to 36 months
Lordelo et al.	2006	exploratory[b], longitudinal	home	Salvador (BA)	Cognitive development	WIPPSI-R/BSID II	1 to 3 years old[g]
Lordelo et al.	2007	explorator, longitudinal	daycare	Salvador (BA)	Cognitive development	WIPPSI-R/BSID II	13 to 37 months / 38 to 66 months [f]
Maria-Mengel e Linhares	2007	descriptive exploratory[b]	home	Ribeirão Preto (SP)	Global development	HOME/DENVER II	6 to 44 months
Martins et al.	2004	cohort[a]	home	Pelotas (RS)	Risk factors	HOME	4 years and 5 months
Miquelote et al.	2012	explorator, longitudinal	home	Piracicaba (SP)	motor/cognitive development	AHEMD/ BSID III	9 /15 months [f]
Moura et al.	2004	exploratory [b]	home	[e]six cities in different regions	Mother's knowledge on child development	Versão brasileira do KIDI	≤12 months

Table 1. General characteristics of the Brazilian studies analyzed.(continuation)

Authors	Year Publishing	Type of study	Ecological Environment	City /State	Studied outcome	Instrument Used	Age
Moura et al.	2010a	cohort[a]	home	Pelotas (RS)	Global development	BSDI	24 months
Moura et al.	2010b	cohort[a]	home	Pelotas (RS)	Global development	BSDI	12/24 months [f]
Oliveira et al.	2012	quasi-experimental	home	Sapucaia do Sul (RS)	motor development	AHEMD/AIMS	2 to 16/ 4 to 18 months [f]
Paiva et al.	2011	exploratory[b]	home	Recife (PE)	Global development	BSID III versão triagem	9 to 12 months
Pilz e Schermann	2007	exploratory[b]	home	Canoas (RS)	Global development	DENVER II	0 to 6 years old
Rezende et al.	2005	exploratory[b], longitudinal	daycare	São Paulo (SP)	Global development	DENVER II	4 months to 2 years old/ 2 to 4 years old[f]
Santos L et al.	2008	cohort[a]	home / daycare	Salvador (BA)	Cognitive development	HOME/BSID II	20 to 42 months
Santos D et al.	2008	cohort[a]	home / daycare /neighbor hood	Salvador (BA)	Cognitive development	HOME/WIPPSI-R	5 years old
Santos et al.	2009	exploratory[b]	Daycare	Piracicaba (SP)	Motor development	PDMS-2	6 to 38 months
Santos et al.	2013	exploratory[b]	Daycare	Cidade (SP)[d]	cognitive motor development	BSID III	13 to 41 months
Sartori et al.	2010	exploratory[b]	home	Caxias do Sul (RS)	motor development	AIMS	0 to 16 months
Silva et al.	2006	exploratory longitudinal	home	Araras (SP)	motor development / maternal practices	AIMS	6/9/ 12 months [f]
Soejima e Bolsamelo	2012	quasi-experimental	daycare	city (SC) [d]	motor and mental development (cognitive)	BSID II	0 to 36 months [g]
Souza et al.	2008	descriptive and exploratory[b]	Childern's education	Cuiabá(MT)	Global development	DENVER II	4 /6 months [f]
Souza et al.	2010	exploratory, longitudinal	daycare	Piracicaba (SP)	Motor development	BSID III	12/17 months [f]
Veleda et al.	2011	descriptive[b]	home	Rio Grande (RS)	Global development	DENVER II	8 to 12 months
Viera et al.	2007	exploratory[b]	home	Campinas (SP)	Global development	DENVER II	11/13 months [f]

[a] transversal study from a cohort;[b]transversal study;[c] Campo Grande (MS), Florianópolis (SC), Teresina (PI) ; [d]not identified in the article; [e]Belém (PA), Itajaí (SC), João Pessoa (PN), Porto Alegre (RS), Rio de Janeiro (RJ)e Salvador(BA);[f] staring age/final age; [g] authors did not mention the final age.AHEMD:*Affordances in the Home Environment for Motor Developmemt*; AIDPI:Atenção Integral das DoençasPrevalentesnaInfância; AIMS: *Alberta Infant Motor Scale*; BSID:*Bayley Scales of Infant and Toddler Development*; BSDI: *Battelle Screening Developmental Inventory*; CINPE*: Croyancesesidéessurlêsnourissonsetpetitsenfants;*DCCPAV: Desenvolvimento do Comportamento da Criança no PrimeiroAno de Vida;ECERS-R: *Early Childhood Environment Rating Scale-Revised;* ENE: ExameNeurológicoEvolutivo; HOME:Home *Observation for Measurement of the Environment;*ITERS-R:***Infant/Toddler Environment Rating Scale-Revised;*** IPHEM: Instituto Heloísa Marinho; KIDI:*Knowledge of Infant Development Inventory*;PDMS-2: *Peabody Developmental Motor Scale-2*; RAF:Inventário de Recursos do Ambiente Familiar; WIPPSI-R: *Wechsler Preschool Scale of Intelligence – Revised.*Source: Author's own collection.
Source: The authos.

Barros et al.[8] studied in a cohort of children the effect of the quality of stimulation received at home through their own index, consisting of five questions about the child's activities in the week preceding the interview. The authors demonstrated that both, the indices

and the items separately, had a positive effect on children's development especially, "having a book at home" and "having heard a story." Caçola et al.[9] and Miquelote et al.[12] evaluated the relationship between motor development and quality of the home environment, through *Affordances in the Home Environment for Motor Developmemt* (AHEDMD)[14]. The first authors found a modest correlation between the studied constructs, whereas the latter found a strong correlation between the fine motor performance and the AHEDMD subscales, daily activities and learning materials.

There are also surveys within the family context aimed at better understanding the parents' level of knowledge, maternal beliefs and practices related to child development[15-17]. These studies compared mothers from different contexts: urban and rural areas[15], different urban centers[16] and socioeconomic classes[15-16]. According to these studies, the more mothers were schooled, the better the knowledge about the child development[15-16]. The higher the education of mothers, the more concerned they were with stimulation for child development. On the other hand, mothers in rural or urban areas, but less educated, valued more discipline[15.] Silva et al.[17] found that maternal practices related to the way they carried, placed and positioned their babies influenced the gross motor development of 14 babies.

Some studies have assessed what socioeconomic risk factors were related to the family environment, unfavorable to the child development[7,11,18-19,20-22]. Home environments were qualified according to HOME or AHEDMD. The studies found that the low quality of the home environment was associated with: low monthly income[11,18-19,20], the lower strata in the economic classification[18-19], the mother's low education[7,11,18-19,20], the father's low education[18-19], the large number of people living in the house[11,18,20], younger children[7,18] the presence of many siblings[7,11,20], tobacco use during pregnancy[20], children sleeping with parents up to four years of age[20], mothers with psychiatric disorders[20], mothers who did not work out[7] and female single parents[7,18].

Other studies[8,21,23-28,29] investigated the relationship between the risk factors existing in the home environment and child development. These studies, in most cases, found a relationship between the children's poor performance in tests and the following risk factors: low maternal schooling[8,25-28]; the mother having done less than six antenatal consultations[25-26,29]; unemployed parent[27]; belonging to the lower strata of the economic classification[8,25-29]; having a mother who does not work outside the home[8]; father's low schooling[24]; having many siblings[28]; less support from parents in caring for the child[28] and lower psychosocial stimulation in the home environment[25-26].

The mother's age was also a risk factor analyzed in the family environment by some researchers[21-23]. Vieira et al.[22] found no statistically significant difference in the global development between the children of adolescent and adult mothers. In turn, Sartori et al.[21] found that the motor performance of children of adolescent mothers was lower than the children of adult mothers. Lordelo et al.[23] found that the cognitive performance was more favorable in children whose mothers started their reproductive life later.

There are few Brazilian intervention studies aimed at the stimulation of child development in the family environment. The study by Oliveira et al.[30] was the only focused on the family, more specifically with guidance for mothers. In it, infants were divided into experimental and control group matched for age. Mothers of the first group received guidance on the stimulation of motor development and environmental changes. The children were reassessed after eight weeks. Although the intervention group had improved their motor performance when compared to pre-test, there was no difference between the control and the intervention groups.

Child development within the context of daycare centers

While there are many Brazilian studies in the context of public daycare[31-37], few are those who verify the influence of the educational environment in the child development[38-42]. Existing studies have different research designs: longitudinal study with evaluation before and after attending daycare[42], comparison between children who attend or not daycare[40], comparison between the performance of children attending private and public daycare[41] and comparison between children from daycare environments of heterogeneous quality[38-39].

Rezende et al.[42] studied 30 children since they first started attending a daycare, conducting a series of three evaluations. At the end of this period, the authors found an improved performance on the children's personal-social skills and a worsening on their language skills. Lordelo et al.[40] compared the cognitive development of economically disadvantaged children, who were evaluated four times over 26 months.19 of the children attended a daycare and 18 remained at home. The authors found no difference between the groups regarding the outcome studied. Santos et al.[41] compared the cognitive, fine and gross motor development of children with the same socioeconomic classification. 69 of the children attended a public daycare and the other 47 private daycare centers. The authors found a worse performance in all the development domains studied in the group of children attending public daycares.

A study on the impact of the quality of early childhood education in school performance was conducted by Campos et al.[39] in different Brazilian cities. The authors found that attending daycare centers, especially those of better quality, made a difference in the performance of 762 children in "Provinha Brazil", a diagnostic evaluation of the literacy level held in the second year of primary education in Brazilian public schools. Even controlling family factors such as income and mother's education, children who attended good quality preschools scored 12% higher in the scale of grades at "Provinha Brazil" when compared to those who did not attended preschool.

Barros et al.[38], using a random sample of 500 children from 100 daycare centers in the city of Rio de Janeiro, studied the impact of the daycare quality on child development, controlling the influences the child's family and personal characteristics. The authors found a moderate impact of daycare quality on the children's global and social development and no impact on their physical development.

The prevalence of delay was observed in several studies in different areas of child development and risk factors, considering children attending public daycare centers, but not necessarily associating the results with exposure to the educational environment[31-37]. Souza et al.[36] (2008), Biscegli et al.[32] and Brito et al.[33] found a prevalence of suspected delay in the global development of children in early childhood, respectively, 30.2%, 37% and 46.7%, through a screening tool. Both Souza et al.[36] and Brito et al.[33] carried out a study with children at pre-school age and found an association between lower test performance and risk factors: being male, belonging to the oldest age group, from five to six years old. The latter authors also highlighted as risk factors, the mother not attending prenatal consultations (or only from the third month of pregnancy) and alcohol consumption during pregnancy.

Eickmann et al.[34] evaluated 109 children attending daycare centers and found no association between motor performance and sociodemographic risk factors, but they found association with biohazards. Santos et al.[35] evaluated 145 children and found a 17% prevalence of delayed motor development, highlighting the worst performance of children under 24 months. Baltieri et al.[31] assessed 40 children attending public daycare centers and found 22.5% with suspected delays in gross motor development and none in fine motor

domain. Similarly, Souza et al.[37] reported that gross motor development was more hindered than the fine motor development, when they studied 30 children attending daycare.

Intervention studies oriented directly to child development focusing on collective environments such as day care are scarce[43-44]. Researchers found positive outcomes when performing individual intervention in children with delayed cognitive and motor development[44] or memory training for babies attending public daycares [43].

Child development within different ecological contexts

Given the multifaceted nature of child development, Santos L et al.[45] and Santos D. et al.[46] conducted studies taking into account the different aspects of the environmental contexts, as well as biological factors and those related to the child. Santos L et al.[45] carried out a longitudinal study to investigate the relationship between several factors and cognitive development of 320 children from different economic levels and environmental conditions. The risk factors evaluated were: quality of the home environment, attendance to daycare, socioeconomic conditions and nutritional status. Hierarchical linear regression analysis indicated that socioeconomic factors indirectly influenced the cognitive development, mediated by the child's immediate context factors such as the quality of the home environment and attendance at day care.

D Santos et al.[46] performed a study to investigate the impact of poverty on the cognitive development of 346 children. Data were collected on socioeconomic factors, daycare attendance, quality of the home environment, sanitary conditions in the neighborhood, diseases during childhood and conditions at birth. The authors found that the factors that influenced negatively the cognitive performance were low maternal education, father absence, inadequate sanitation at home and in the neighborhood, malnutrition and low birth weight. The positive influence were the child's school attendance and the high quality of the home environment.

It is noteworthy that the study of D Santos et al[46] was one of the few Brazilian studies evaluating the aspect related to the neighborhood, although it was a secondary data related to infrastructure. Campos et al.[39] used another secondary data related to the neighborhood – the educational level of the population living in the neighborhood where the school the child taking the "Provinha Brazil" was located.

Discussion

The environmental context where the child lives plays an important role on his/her motor, cognitive and psychosocial development[47]. When considering the Brazilian literature in this review on environment and child development, four types of studies stood out: (a) those addressing the relationship between environmental quality and environmental risk factors; (b) those relating the risk factors to the delay in the global development or in development domains; (c) those with a prevalence of delayed global development or in specific domains; and (d) those relating the environmental quality to child development.

The family microenvironment plays a fundamental role on child development[48] in the child's early years. It is the parents' responsibility to provide for the children's basic needs such as affection, food, health and security, as well as fostering a stimulating environment for their development[48]. Thus, corroborating with the international literature[4.49], Brazilian studies showed that the low quality of the home environment was related to lower demographic or

socioeconomic factors, which, in turn, were related to less favorable child development. There is evidence that family environment and parental care are mediators on the effects of socioeconomic status on children[4].

Still in the home environment area, Brazilian literature brings an important contribution by highlighting the importance of the parents' knowledge, beliefs and practices related to child development[16.17]. These studies indicate that there are differences between mothers when considering variations such as living in rural or urban area, belonging to different social strata, among others. In addition, maternal practices influence on child development, as verified by Silva et al.[17], in the motor domain.

Beyond the house, the influence of another microsystem has been increasingly highlighted on the child development - the educational one. In developing countries, such as Brazil, children are attending daycares at increasingly early ages, spending between 4 and 12 hours daily [39] , due to urbanization, economic growth, social struggles, the changing role of women in society. Several studies on the prevalence of developmental delay were conducted with children attending public daycares[31-37]. However, it is difficult to make a comparison between them, because they employed different age groups, different standardized methodologies and tools – from screening tests of global development to diagnostic tests for specific areas of development. Noteworthy is the high prevalence of suspected delay in the global development of children attending public daycares. However, it is important to emphasize that screening tests were used in many of these studies[32-33,36]. In other words, these are not diagnostic tests, but they indicate the need for further investigation[26,50].

There is a considerable amount of Brazilian studies focused on risk factors to child development and, from these findings, it is important to advance towards intervention studies, still scarce in Brazil[30,43,44]. Although intervention strategies in the family are important, the intervention in collective environments benefit more children. However, the few studies of intervention in daycare centers in Brazil focus on an individual approach[43-44].

Another environment that can influence on child development, although less studied, even in the foreign literature, is the neighborhood where the family lives[51-52]. In Brazil, there are virtually no studies investigating the relationship between child development and the neighborhood, except for Campos et al[39] and Santos D et al.[46], who used secondary data to infer the role played by the neighborhood. During childhood, the neighborhood seems to influence on child development through the family's mediation or moderation, especially in the case of young children[52]. It is the parents' role during the first years of life to supervise and make decisions for the child, controlling, therefore, their participation in activities both inside and outside the home. In addition, parents act to filter the child's exposure to the neighborhood[52]. On the other hand, issues related to social organization, physical and socio-economic structure of the neighborhood where the family lives may affect the parents and, through parental care, reach the small child [4].

As for the environmental quality and child development, Brazilian studies bring important contributions to the international publications scenario, especially in the motor development domain[9,12,18-19,31-33,35-39,41]. According to Zaslow et al.[53], when conducting an international literature review, there are more studies on some areas of child development at the expense of others, such as the influence of the daycare environment. The authors analyzed 64 articles, from 1979 to 2005, and found that 85% of the studies addressed psychosocial development and language, 54% cognitive development and only 5% evaluated the physical development, i.e., the motor development and aspects related to the child's health.

Most Brazilian studies investigate the influence either of the home environment [7,9,11-12], or the daycare[40,42,54], separately. However, following an international trend, some recent

Brazilian studies[38-39,45-46] already seek to study this issue considering the interrelationship between the environments experienced by the child as well as other relevant factors, given the multifaceted nature of child development .

When considering international literature, we observed that, over decades, there was a shift of research within this theme. A first generation of studies tried to compare children who stayed at home to those attending daycare[55]. The findings of these studies are controversial and they were later criticized, since the influence of the family environment factors in children attending daycare were not controlled [56-57]. It is known that the sociodemographic characteristics and the families' values directly influence the choice of daycare center[58.] Not only parents with more years of schooling or higher socioeconomic status, but also those more attentive to the child's needs, choose the daycare center looking for promoting further education[56.59]. Therefore, according to Ducan and Gib-Davis[60], the choice of daycare alone reflects on family characteristics. This means that the child's good performance cannot be always attributed only to the quality of daycare center because if the family was concerned in choosing the best daycare, it most likely is a more responsive and attentive family to stimulation of the child at home.

The second generation of research turned to studies within the daycare environment; however, they sought to control the influence of the home environment through statistical analysis[56,61]. Although this meant a major progress in the studies, the current literature alerts to the fact that dealing with aspects related to the family as a covariate may underestimate the effect of the daycare on child development[61]. Therefore, at present, the so-called third generation of studies on the influence of daycare on child development seeks to understand rather than control, how the home and the daycare interact in promoting child development, through the study of moderating and mediating effects[57]. Environmental influences on child development has been understood in terms of the relations of protection, risk, compensation or cumulative impact between the ecological environments in which the children live[62].Therefore, it is necessary an analysis that allows us to understand the interactions between these ecological environments on the child development.

Conclusion

When assessing Brazilian studies on the environmental context and child development, it is noticed that there is an extensive literature within the family environment focused on the socioeconomic risk factors, whether related or not to the environmental quality. In the educational environment, most studies focus on the prevalence of developmental delay in public daycares. Therefore, studies on risk factors as well as those on prevalence may, from now on, serve as the base for future intervention studies, which are still scarce in the Brazilian literature.

Some Brazilian studies relate child development to the quality either of the daycare, or the house. When considering the importance of environmental factors on child development, further studies are needed within this issue; however, it must be taken in account, during the methodological planning, the interrelationship between the child's immediate environments, given the multifaceted nature of human development.

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Received on Nov, 13, 2015.
Reviewed on, Dec, 20, 2015.
Accepted on Dec, 21, 2015.

Autor address: Rosane Luzia de Souza Morais. Campus JK – Rodovia MGT 367 – Km 583, N 5000 Bairro Alto da Jacuba, Diamantina-MG. CEP 39100-000. Telefone: (38) 3532-1239. E-mail: rosanesmorais@gmail.com/ rosane.morais@ufvjm.com.br