

Motivation of children at risk for delay in development: the impact of an intervention with mothers

Estimulação de crianças com risco para atraso no desenvolvimento: impacto de uma intervenção com mães

Motivación a los niños en riesgo de retraso en el desarrollo: el impacto de una intervención con las madres

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How to cite this article:

Torquato IMB, Collect N, Souza MHN, Vaz EMC, Vieira DS, Reichert APS. Motivation of children at risk for delay in development: the impact of an intervention with mothers. Rev Gaúcha Enferm. 2022;43:e20210154. doi: <https://doi.org/10.1590/1983-1447.2022.20210154.en>

ABSTRACT

Objective: To analyze the impact of an educational intervention with mothers on the motivation of children at risk for development delay, in the light of Paulo Freire's Theory.

Method: A qualitative, exploratory and descriptive study carried out in March 2018 with mothers of children under two years old enrolled in Reference Centers in Early Childhood Education. Semi-structured interviews were carried out after an educational intervention and the data obtained by the thematic technique were analyzed.

Results: There was an increase in maternal knowledge and changes in attitudes about child motivation after intervention, enabling them to share information with other mothers and maternal empowerment to identify changes, motivation and autonomy to seek new ways to promote child development.

Conclusion: The educational intervention proved to be effective, as mothers began to encourage their children at home and share information with other mothers.

Keywords: Child development. Health education. Mothers.

RESUMO

Objetivo: Analisar o impacto de uma intervenção educativa com mães sobre a estimulação de crianças com risco para atraso no desenvolvimento, à luz da Teoria de Paulo Freire.

Método: Estudo de abordagem qualitativa, exploratório e descritivo, realizado em março de 2018 com mães de crianças menores de dois anos matriculadas em Centros de Referência em Educação Infantil. Realizaram-se entrevistas semiestruturadas após intervenção educativa e analisaram-se os dados obtidos pela técnica temática.

Resultados: Evidenciou-se o aumento do conhecimento das mães e mudanças de atitudes quanto à estimulação infantil após a intervenção, possibilitando socialização das informações com outras mães e empoderamento materno, que ajudam na identificação de alterações, motivação e autonomia para buscar novas formas de promover o desenvolvimento infantil.

Conclusão: A intervenção educativa se mostrou efetiva, pois as mães passaram a estimular seus filhos no domicílio e a compartilhar as informações com outras mães.

Palavras-chave: Desenvolvimento infantil. Educação em saúde. Mães.

RESUMEN

Objetivo: Analizar el impacto de una intervención educativa con madres a cerca de la estimulación de niños en riesgo para el desarrollo, a la luz de la teoría de Paulo Freire.

Método: Estudio cualitativo, exploratorio y descriptivo, celebrada en marzo de 2018 con madres de niños menores de dos años matriculados en Centros de Referencia en Educación Infantil. Se realizaron entrevistas semiestruturadas después de la intervención educativa y se analizaron los datos obtenidos mediante técnica temática.

Resultados: Se evidenció un mayor conocimiento de las madres y cambios en las actitudes sobre la motivación infantil después de la intervención, que les permitió socializar información y empoderamiento materno para identificar cambios, motivación y autonomía para buscar nuevas formas de promover el desarrollo infantil.

Conclusión: La intervención educativa resultó ser efectiva, ya que las madres comenzaron a animar a sus hijos en el hogar y a compartir información con otras madres.

Palabras clave: Desarrollo infantil. Educación en salud. Madres.

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INTRODUCTION

The first years of life are a period of dramatic changes in the physical and neuropsychomotor development of children. Therefore, continuous care based on regular monitoring of growth and development is necessary, for the early identification of possible health problems⁽¹⁾.

Child development is a process that begins at the moment of conception and involves aspects such as physical growth, neurological, behavioral, cognitive, social and affective maturation of children⁽²⁾. This process occurs in a continuous and organized way of motor, psychological and cognitive, and language changes, resulting from the interrelation between genetic inheritance and the environment in which the child lives⁽³⁾. Therefore, exposure to negative biological or environmental conditions, such as prematurity, a chronic disease in childhood; living in areas with inadequate water supply and sanitation, in overcrowded conditions; children of parents with drug addiction, among others, can cause significant harm to the health of this population, including disorders in different domains of development⁽⁴⁾.

One of the goals of Sustainable Development is to ensure that all human beings can fulfill their potential in dignity and equality⁽⁵⁾. Thus, investments are needed for protection, promotion and support as early as possible in childhood, so that all children reach their full potential for development⁽⁶⁾.

Among the actions for monitoring and promoting development, Growth Monitoring and Promotion (GMP) for children aged 0-3 years deserves mention, since this is a critical period for interventions that prevent disorders in child development⁽¹⁾.

GMP actions, essential in early childhood, involve not only the identification of disorders in development, but also assistance to the family, especially mothers, regarding the provision of adequate guidelines for the promotion of child development, such as of early motivation⁽⁴⁾.

The practice of motivation in the first 36 months of life provides an advantage that optimizes development, due to intense neuroplasticity. Mothers, who are considered the primary caregivers, can provide stimulating spaces at home, whether through toys, objects or games, in order to stimulate the children's senses⁽⁴⁾. They are also able to establish stronger affective bonds, which are important for personality formation and prevention of disorders in this domain, in adult life⁽⁷⁾.

Children who have vulnerabilities may face developmental delays. Therefore, family-centered interventions, with information on stimulation, playful and loving interactions that promote the child's development, are valuable resources that should involve preparation and empowerment of the

parents⁽⁸⁾. Special attention should be given to mothers, as they generally play the role of main caregivers and promoters of the necessary motivation for their children.

Educational interventions can undoubtedly be considered an important tool and a key action in the health work process. It can facilitate the understanding of mothers' difficulties, helping them to face problems, empower themselves⁽⁹⁾ and (re)learn to implement stimuli correctly, considering the characteristics and needs of children⁽¹⁰⁾. The intervention should be culturally sensitive, building on the mothers' prior knowledge.

In this educational context, it is essential that the teaching-learning process be established in a horizontal and participatory manner, based on active listening, respect for the learner's experiences and prior knowledge about the topic⁽¹¹⁾. Through dialogue and the problematization of everyday life, student/mother and educator/professional will be able to learn to do things together, to recreate knowledge, in order to transform reality from human attitudes⁽¹²⁻¹³⁾.

The present study is based on the following problematizing question: Can educational intervention be considered an important instrument for promoting knowledge and changes in mothers' attitudes towards the motivation of child development? The study aimed to analyze the impact of an educational intervention with mothers on the motivation of children at risk for developmental delay, in the light of Paulo Freire's Theory.

METHOD

Qualitative, exploratory and descriptive study carried out in the six Public Reference Centers in Early Childhood Education (CREI), also called daycare centers, located in rural and urban areas of the municipality of Cuité, in the state of Paraíba. The city is 235 km far from the capital João Pessoa, in the micro-region of Curimataú Ocidental Paraibano. The territorial area is 741,840 km and the estimated population is 20,348 inhabitants.

At the time of data collection, 392 children were enrolled, of these 137 were under two years of age. Initially, the development of children under two years of age was assessed, according to the Child Development Surveillance manual in the Context of Integrated Care for Childhood Prevalent Diseases⁽¹⁴⁾, with the purpose of obtaining information on risk factors, child's development, head circumference, observation of the presence of phenotyping, postural disorders, motor development, primitive reflexes in the child. Thus, the evaluation forms contained in the aforementioned manual and widely used by professionals in the field of pediatrics in the context of primary health care were completed.

After this assessment, 52 children were classified as at risk for developmental delay and their mothers were included in the study to participate in the educational intervention. The inclusion criteria for participation in the study were mothers of children under 2 years and whose children were at risk for delay in development after physical assessment and who were attending municipal daycare centers in Cuité on a weekly basis. The exclusion criteria were mothers of children with special needs and mothers who had visual, hearing and/or language impairments, as these are factors that directly interfere with the results of the study.

Printed invitations containing information about the day and time of the educational session were previously sent to the 52 mothers by the heads of the institutions. The educational actions and data collection (through the application of a form in the pre-intervention stage), for the investigation of maternal sociodemographic and biological characteristics (maternal age, marital status, maternal education, paid work, family income and number of children) took place in the morning or afternoon shifts, in March 2018. A meeting was held at each Public Reference Center in Early Childhood Education. The average duration was five hours.

The content addressed in the educational intervention was related to development (definition, risk factors; main milestones of child development; importance of monitoring child development) and child motivation (the importance of motivating the child at home; presentation of the environment and material resources suitable for child motivation. practices on possible activities to be conducted with children to stimulate child development were also carried out, which are recommended in the manual of Integrated Care for Childhood Prevalent Diseases⁽¹⁴⁾. The teaching-learning strategy is supported by the concepts of popular education, under the principles of Paulo Freire⁽¹²⁾, through a dialogic relationship, active listening, exchange of experiences and problematization of maternal reality.

The reference for this study was the theoretical-methodological framework of Paulo Freire⁽¹²⁾, through the methodology of problematization, as this method allowed the participants to attribute meanings to their experiences during the workshops, share knowledge, self-knowledge and, mainly, empowerment, from a liberating point of view⁽¹³⁾.

During the educational intervention, the mothers were asked to talk about the development of their children. Triggering questions were used to stimulate the debate. After the needs of the group were identified, there were exchanges of experiences, re-signification and construction of new knowledge shared, so that everyone had the opportunity to learn and teach. The triggering questions to stimulate debate and dialogue were "What do you understand about

child development?"; "How do you evaluate your child's development?"; "What would you like to know about your child's development and stimulation?" Based on the above mentioned, he needs of mothers were addressed according to the planned content.

Anchored in the thought of Paulo Freire⁽¹²⁾ and in the theoretical framework of popular education, an attempt was made to create spaces for dialogue in the workshops. The mothers were invited to reflect and explain their perceptions about their children's development. The intervention was proposed as a space for listening, re-signification and reinvention, based on the needs expressed by the group. The problematization provided exchange of experiences and construction of knowledge, based on the reality and challenges of each mother. Thus, based on what was already known and on the identification of knowledge gaps, new knowledge was built in a process shared by all mothers. In this scenario, everyone learns and teaches.

To facilitate the construction of knowledge and the exchange of experiences of mothers on concepts, risk factors, stages of development and the stimuli that should be practiced with children at home, according to their age groups, active methodologies were used in the workshops, such as dialogic exhibitions with the help of illustrative banners; handling dolls, building objects with recyclable materials for child motivation, mats, balls, towels, rubber mats, toys, among others, in order to simulate realistic everyday situations, in addition to reports of experiences, discussions on the subject, concerns and suggestions.

During the interventions, the mothers were asked to handle dolls, using different materials such as mats, balls, towels, stimulation mats, toys, among others, in order to simulate practical tasks of visual pursuit, activities to stimulate trunk control, and changes in body posture (sitting, rolling over, dragging, crawling, all fours with support on the knees, half-kneeling, orthostasis and ambulation) for certain age groups, as recommended by the manual of Integrated Care for Childhood Prevalent Diseases. The mothers also built, from disposable and household objects, materials to stimulate their children, reported their own stories, experiences, challenges, ways of coping with problems, popular knowledge on the subject, their doubts, concerns and exposed suggestions so that knowledge could be built jointly, between the students (mothers) and the educator (researcher).

At the end of each activity, doubts were resolved collectively and, according to the needs of the participants, new themes were included, such as the importance of playing, of love and dialogue for the child's development.

To facilitate the apprehension of the knowledge built in the educational intervention, the mothers received a printed

booklet, which was elaborated by the researcher, and a graphic design, containing illustrations and guidelines on the exercises performed in the workshops and which should be practiced with the child at home. The booklet was prepared based on the text of the manual for Integrated Care for Childhood Prevalent Diseases⁽¹⁴⁾, but taking into consideration the mothers' level of education, that is, adapting the scientific language and making it more appropriate for the target audience. The contents covered in the booklet were divided into topics, namely: "What is child development? What can affect child development? How does child's development occur? Why and how can we stimulate child development?"

At the end of the educational interventions, a global evaluation of the workshop was carried out through the dynamics "That's good... What a pity... and What about...". Mothers were invited to complete the sentences with these terms explaining their opinions about the educational session.

The final phase of the study was carried out three months after the educational actions, since a time interval was necessary for the mothers to implement the contents addressed in the educational intervention in the home context with their children. At that stage, of the 52 mothers who fully participated in the educational intervention, 12 of them, two from each Public Reference Center in Early Childhood Education, were randomly invited to participate in the semi-structured interviews, according to the following guiding questions: did you experience any difficulties in applying the acquired knowledge about child stimulation at home? Talk about these experiences; What do you think of your child's development? How do you rate the workshop on stimulating child development?

The interviews were scheduled individually, according to the convenience of the mothers in each Public Reference Center in Early Childhood Education, lasted in average 20 minutes and were recorded in digital media and transcribed in full by the main researcher who was closely involved with the scenario and study participants and had experience and training in this type of data collection, and thus a pilot test was not necessary. Interviews were discontinued to avoid data saturation. According to the theoretical data saturation criterion, data collection is considered saturated when no new elements are found and the addition of new information ceases to be necessary⁽¹⁵⁾.

The results were interpreted by thematic analysis, according to the following steps: data ordering, classification and final analysis. The data were transcribed and carefully read, and then the statements were arranged in a given order. Subsequently, the themes found were regrouped, and relevant structures were built for the analysis and final discussion in the light of Paulo Freire's theory and the relevant literature.

To preserve the mothers' anonymity, the reports were identified by letter "M" followed by the interview order number.

The study was approved by the Research Ethics Committee, under protocol No.1,828,821, CAAE No. 82127817.3.0000.5188, in accordance with the ethical principles provided for in Resolution 466/12. The participants signed the Free and Informed Consent Term (ICF). They were fully informed about the purpose and the steps (phases) of the study, the risks involved and their right to withdraw their consent to participate at any time, as well as of the guarantee of confidentiality and anonymity. A copy of the aforementioned term was given to each participant upon voluntary agreement.

■ RESULTS

Twelve mothers aged between 19 and 41 years old, who had low socioeconomic status, lived in stable marital union and had completed eight or more years of schooling participated in the study. The respondents had a monthly family income of less than one minimum wage. Most did not perform work activities, and those who did, worked sporadically, as day laborers. Most of them had one child and the children's ages ranged between 13 and 24 months.

Two thematic categories were constructed with the use of data analysis, as follows: (Re) learning and sharing knowledge about child motivation; and Broader perspective after the educational intervention: maternal motivation and empowerment.

(Re) learning and sharing knowledge about child motivation;

When questioned about the educational intervention, the mothers showed satisfaction in having participated in the initiative and said that they acquired more knowledge about the stimulation of their children's development and changes in attitudes in everyday life, in view of the acquired knowledge.

The mothers reported that the educational intervention contributed positively to refute popular knowledge on the subject, as several things that the mothers believed to be correct were considered inappropriate for the children. Furthermore, re (learning) about child development and motivation also made it possible to share information with other mothers, that is, these mothers became knowledge multipliers.

[...] I learned to do things that I did not know, nor imagined how to do and I was able to correct some things that I thought were right and were not. Therefore, the intervention was good, because I learned some things

and because I share what I know with other mothers I know [...] (M3).

[...] I was able to learn what is right and correct what I was doing wrong. I didn't know what they were for and how many things discussed there [in the intervention] should be done [...] and today I know what I'm doing and I even show some friends how it should be done (M5).

[...] I learned a lot about the subject and there were some things I didn't know. I have already told some mothers how they can motivate their children. I've already explained the booklet to three of my friends (M9).

With the new knowledge acquired, the mothers also began to give more attention and affection to their children, as well as to motivate them daily, understanding the stimulation of development as a priority and inherent to the act of caring. Therefore, these mothers improved the quality of care to their children, strengthening the mother-child bond, as well as transforming the reality in which they live:

[...] in my opinion, the intervention was very good because I understood that motivation is also a type of care. This meeting made us understand better that it is necessary to sit down with the children to play, because it is important for their development. I started to give more value to games, to tell stories and to give my kid even more affection [...] I try to be more present (M6).

[...] today I can honestly say that I motivate my kid much more than before. Today I dedicate myself more and try to pay more attention to simple things that I didn't do due to lack of time, like playing with him/her [child], telling him a story and staying closer, giving him more attention, more affection (M4).

Broader perspective after the educational intervention: maternal motivation and empowerment

The educational intervention contributed to maternal empowerment to stimulate the development of their children. In addition to being motivated, they felt safe to identify aspects that were previously unnoticed, such as the difficulties and the progress of their children related to reaching developmental milestones.

[...] I feel much more secure today because now I know what I'm doing with him/her [child]. I didn't have much idea and I didn't even know what children needed at the different stages of development [...] I'm more prepared and more stimulated to go on (M1).

[...] I can see improvement in some things after I started to stimulate him [son] more. The meeting helped a lot to observe my son more. Today I pay more attention to his/her [child] development, and I can already identify many things that I didn't even know before [...] (M2)

[...] I am more motivated to motivate because today I can say that I learned many things and I know what they are for. I am more able to observe him/her [child] development (M10).

In addition to motivation, mothers have greater autonomy in caring, as they seek new alternatives, such as virtual technology, to explore new modalities of stimuli and the creation of new alternative objects to promote the development of their children.

[...] now I have more options to try to stimulate him/her [child]. Thanks to the suggestion of games that we can do, I'm always looking for new things to create on the internet (M8).

[...] we are always looking for new things to do and the internet helps a lot by providing new ideas (M11).

[...] I'm always looking for games to play. I loved these ideas and I'm always looking for other things to do. The intervention opened my mind a lot so that I could invent cool things for improving his/her [child] development (M12).

The discussion about the educational booklet aimed to stimulate child development for the age groups up to 24 months with the mothers also contributed to the learning and maintenance of motivation over time. This gave mothers autonomy to promote the development of their children at home. The use of clear and objective language, with illustrations, in the booklet facilitated understanding and motivation in different age groups by the mothers.

[...] I think the booklet helped me a lot to motivate him/her [child] at home, and it made me feel even more confident. It made the motivation a lot easier at home because I could access the information and remember what I learned (M6).

[...] *The booklet was very good because it had many illustrations that facilitated understanding. When I had doubts, I looked at the booklet [...] it helped me a lot (M8).*

DISCUSSION

The educational workshops on child motivation had a positive impact, both for the mothers of CREI children and for their children, proving to be an effective strategy, capable of increasing knowledge and transforming attitudes.

The mothers also recognized their important role in the care for children, as they became more concerned with their children's development, feeling empowered and capable of identifying disorders and appropriately motivating the children.

This study corroborates research that demonstrated that developmental surveillance in the context of Integrated Care for Childhood Prevalent Diseases has positive results, as it advocates the importance of guidance to families on child development and motivation⁽¹⁾. Promoting educational interventions based on participatory pedagogy can be a relevant strategy to expand mothers' knowledge on the subject, strengthen their skills and promote behavioral changes for the care of children in the context of development.

In addition to strengthening maternal skills to encourage children in the home environment, broader knowledge on the subject will allow for an expanded dialogue with the health team during the monitoring of child development⁽¹⁶⁾. During these meetings, health professionals will have the opportunity to listen to the mothers and add new information to their assessments, which may help in the diagnosis of developmental disorders⁽¹⁷⁾.

When mothers, often the main caregivers, master the new knowledge, they can provide spaces in the home that will create opportunities for experiences that can be predictors for the improvement of child development⁽¹⁸⁾. This aspect was evident when the mothers expressed greater confidence and interest in performing the motivation based on the knowledge learned in the intervention. Therefore, understanding the importance and purpose of the activities was essential for the participants to feel motivated to follow up on the motivation and care at home.

However, emotional involvement, linked to motor stimuli, should also be a topic addressed in this educational process on child motivation, since the full biopsychosocial development of children depends on the affection of their families. A study carried out in Peru found that quality interactions between children and caregivers significantly

improve children's communication, problem solving and fine motor skills⁽¹⁹⁾.

The issue was widely discussed, and after the educational intervention, the mothers realized the importance of affection for healthy development. They changed their attitudes, showing more affection and dedicating more time and attention to their children. This is essential, since without emotional investment there is no fruitful child development.

Therefore, the microsystems where the children are inserted should offer diverse experiences with material resources, but also with the possibility of loving interactions that promote their sensorimotor and emotional development⁽²⁰⁾.

A study⁽²⁰⁾ points out that higher maternal socioeconomic and educational level is associated with better opportunities for environmental stimuli, both through the offer of toys and better organization of the physical environment for the child. However, although the mothers who participated in this study belonged to a socially vulnerable group, with low income and education, these variables did not interfere with their interest in promoting better opportunities for physical and affectionate motivation of their children, since they were able to experience, during and after the educational intervention, ways of coping with the problems.

In view of the positive results analyzed in this study, the educational intervention in health practice can be perceived as an important strategy for transforming human attitudes⁽¹⁶⁾. This was demonstrated in the reports of mothers who said that when they acquired more knowledge about child motivation, they began to rethink their childcare practices.

Thus, discussing the promotion of child development with mothers of children at risk for delay in development empowered them, providing them with scientifically based knowledge so that they were able to improve interactions with other people in the community and/or family members, through effective activities aimed at the overall development of children.

The health professional, in the role of educator, must understand that teaching is not just about exposing previously planned content, in which he/she is the holder of absolute knowledge, but that the human experiences brought by learners can be the main source of learning⁽¹⁶⁾.

This study valued the mothers' prior knowledge, their individual experiences and cultural values based on the problematization of the dialogue. This was fundamental for the reconstruction and expansion of knowledge.

The use of a participatory methodology was important to the in-depth discussion of the issues previously unknown to the mothers, in order to arouse interest, autonomy and add new possibilities for the stimulation of the children. An

example of this was the use of technology for the research of new modalities of stimuli, in order to prevent a future deficit in the children's development.

Information technologies can improve the teaching-learning process, since the learner, in this case the mother, accesses important information about child development, helping them to foster the construction of knowledge in an autonomous and critical-reflexive way⁽⁸⁾. Furthermore, with the availability of virtual spaces, the participants sought interactivity to share experiences and mutual support on this and other childhood themes.

The educational booklet was also a facilitator for learning about child motivation and a source of consultation for mothers at each new stage of children's development. Like a study⁽¹⁰⁾ that implemented the use of educational materials for parents and daycare caregivers, the printed materials made available to mothers were useful as they reinforced the guidelines offered in educational actions, provided easy access to this information and, thus, expanded the knowledge.

Regarding the impact of the intervention on maternal empowerment and autonomy, it provided a transformation of attitudes in childcare. This is only possible when bonds and commitment are built and when mothers seek ways to overcome problems and are responsible for implementing the necessary changes in their lives.

It is believed that the replacement of the traditional and "banking" method of education that cultivates the deposit of ready and finished technical information⁽¹¹⁾, also made it possible for the participants to transform their actions and motivate themselves to stimulate the development of their children. During the workshops, mothers handled dolls, simulating visual, auditory and postural stimulation activities, reporting their own experiences and challenges faced, sharing doubts and concerns so that they could build new knowledge together.

The search for autonomy and the awakening of the student's criticality, which are aims of this study, are basic aspects of popular education, as according to its theoretical principles, for an effective learning, learners must play an active role in their lives, ceasing to be passive in the face of worldly experiences⁽¹²⁾.

According to the liberating approach of popular education, the construction and collective dissemination of knowledge from the student's life experiences are possible, enabling him/her to become a qualified subject in the search for social transformations⁽¹¹⁾. This was demonstrated in the

reports, as the mothers were not only able to build knowledge about child development to implement it in their daily lives, but also to disseminate it to other people in their lives.

It should be noted that the educational intervention in child development aimed to transform mothers' knowledge, empowering them, in order to facilitate children's interactions with people and the family context in a crucial period for their development, since in the first years of life there is intense brain plasticity and the possibility of reversal of possible disorders⁽⁴⁾.

Finally, the educational intervention was effective, as the mothers exposed their limitations on the stimulation of child development and demonstrated that they were prepared to implement and share the knowledge built.

■ FINAL CONSIDERATIONS

The study showed that an educational intervention with mothers on the motivation of children at risk for developmental delay, in the light of Paulo Freire's Theory, was an important, viable strategy capable of promoting knowledge, reflection and transformation of the reality of each participant.

Problematizing everyday situations to the detriment of the vertical transfer of information was fruitful for the construction of collective knowledge and resolution of responses to their needs. The use of participatory pedagogy advocated by popular education, based on real dialogue, listening, respect for cultural values and prior knowledge, is a fundamental tool to be used with mothers in the care of children at risk for delay in development.

The main limitations of this study concern its small size (it was conducted in only one municipality, and few meetings were held), since given the importance of educational interventions to promote healthy child development and the nature of the qualitative approach, the number of participant matters less than the phenomenon and the meanings attributed to them, in a given context experienced. However, the study managed to highlight the importance of educational interventions to promote the development of children at risk for developmental delay, based on popular health education.

Finally, educational interventions on children motivation are recommended with the individuals who integrate the children's microsystems, such as close relatives and caregivers of Public Reference Centers in Early Childhood Education, so that they also engage in children's development.

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The authors declare that there is no conflict of interest.

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Received: 06.30.2021
Approved: 03.14.2022

Associate editor:

Helena Becker Issi

Editor-in-chief:

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