



ORIGINAL ARTICLE

Child development in primary care: a surveillance proposal^{☆,☆☆}



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KEYWORDS

Child development;
Screening;
Risk factors

Abstract

Objective: To evaluate a child development surveillance tool proposal to be used in primary care, with simultaneous use of the Denver II scale.

Methods: This was a cross-sectional study of 282 infants aged up to 36 months, enrolled in a public daycare in a countryside community in Rio Grande do Sul/Brazil. Child development was assessed using the surveillance tool and the Denver II scale.

Results: The prevalence of probable developmental delay was 53%; most of these cases were in the alert group and 24% had normal development, but with risk factors. At the Denver scale, the prevalence of suspected developmental delay was 32%. When risk factors and sociodemographic variables were assessed, no significant difference was observed.

Conclusion: The evaluation of this surveillance tool resulted in objective and comparable data, which were adequate for a screening test. It is easily applicable as a screening tool, even though it was originally designed as a surveillance tool. The inclusion of risk factors to the scoring system is an innovation that allows for the identification of children with suspected delay in addition to developmental milestones, although the definition of parameters and choice of indicators should be thoroughly studied.

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^{☆☆} Study conducted at the Post-Graduate Program in Health Sciences, Universidade Federal de Ciências da Saúde de Porto Alegre (UFCSA); and Child Development Outpatient Clinic, Hospital da Criança Santo Antônio (HCSA), Santa Casa de Porto Alegre, RS, Brazil.

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PALAVRAS-CHAVE

Desenvolvimento infantil;
Triagem;
Fatores de risco

Desenvolvimento infantil em atenção primária: uma proposta de vigilância**Resumo**

Objetivo: Avaliar uma proposta de um instrumento de vigilância em desenvolvimento para utilização na atenção primária, e a aplicação simultânea da escala de Denver II.

Métodos: estudo transversal com uma amostra de 282 crianças até 36 meses da rede pública escolar, numa comunidade do RS. Foi avaliado o desenvolvimento infantil utilizando o instrumento de vigilância proposto e o Denver II.

Resultados: A prevalência de Provável Atraso no Desenvolvimento foi de 53%, sendo a maioria desses na condição de Alerta e 24% com desenvolvimento normal, mas com fatores de risco. No Denver a prevalência foi de 32% com suspeita para o atraso no desenvolvimento. Os fatores de risco e as variáveis sócio-demográficas avaliadas não apresentaram diferenças significativas.

Conclusão: A avaliação deste instrumento de vigilância trouxe dados objetivos e comparativos, nos moldes preconizados para um teste de triagem. É um instrumento de fácil aplicabilidade como triagem, sendo originalmente como vigilância. A inclusão dos fatores de risco no sistema de escore é uma inovação que possibilita o aumento da identificação de crianças com suspeita de atraso além dos marcos do desenvolvimento, ainda que a definição dos parâmetros e escolha dos indicadores deva ser melhor construída.

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Introduction

Child development is a continuous and dynamic process that promotes changes in several areas: physical, social, emotional, and cognitive, in a complex interaction among these changes and the environment where each stage is constructed, based on the previous steps.^{1,2} Development must be understood within the eco-bio-developmental model, which expands from biology and the environment to a broader concept, including epigenetics and neuroscience.^{1,3}

Several studies have shown different prevalence rates of delay according to the evaluation method and age group, reaching up to 18%.⁴⁻⁸ In studies using only screening tests, the prevalence was higher, showing great variation.^{4,9,10}

The early detection of children with possible developmental delays is one of the objectives of routine pediatric consultations.⁵ It is widely established in the literature that the cost of the evaluation and early intervention in child development is up to 100 times lower than that of treating a child with a late diagnosis.¹¹

Recent studies show that investments in the first four years of life have a positive annual rate of return, whereas some late recovery programs show null and often negative returns.¹²⁻¹⁴ Surveillance is a continuous process that occurs during consultations and allows for the early detection of developmental problems,⁷ while screening is part of this process and characterized by being usually discrete and using a standardized tool. The systematic use of surveillance and screening is critical for pediatricians to identify potential risk factors and/or delays and promote interventions.^{5,7,11,15,16}

The American Academy of Pediatrics recommends applying a screening tool in the first three years of life, even in the absence of risk factors, to increase the ability to identify possible delays,^{11,15,17} as, in the absence of a surveillance

process, only 30% of the children will be detected as having delays before they reach school age.¹¹ Recent studies have shown an increase in the use of tools to assess development, but they are still unfrequently used in pediatric services, whether public or private.^{7,17,18}

Some tools are self-administered questionnaires, others are to be used by professionals in search for developmental information, and others that assess the main areas of development.^{7,11,17} The limitations of screening tests are inherent to the tool and age range. Although there are several tools, there is not a unique tool that is universally used for all populations.^{8,19} Historically, the Denver II Developmental Screening Test has been the most often used screening tool worldwide, especially in Brazil, as there is no tool for that purpose. In addition to being easy and quick to apply, the tool validity has been established by the accuracy obtained in the different percentiles in which each task was established for each assessed age.

As with the other screening tools, the Denver II has no hypothesis construct, such as for instance an intelligence test, it defines the age at which a child performs a certain task. Although it has borderline sensitivity and specificity rates, it continues to be used in comparison studies.^{6,7,9,10}

The use of a tool for child development surveillance began to be implemented by the Brazilian Ministry of Health (MOH) in 2002.²⁰ The Integrated Management of Childhood Illness (IMCI) program, developed by the World Health Organization (WHO) and by the United Nations Children's Fund (UNICEF), served as the basis for use in child development surveillance. Subsequently, a manual was published for this purpose and a development surveillance table was adapted and has been used in the Child Health Handbook of the MOH²¹ in the primary care network. This proposal comprises, in addition to the developmental milestones, more relevant risk factors associated with developmental delays.^{2,22}

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