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Assessment of the implementation of an educational intervention on child developmental surveillance with nurses

AVALIAÇÃO DA IMPLEMENTAÇÃO DE UMA INTERVENÇÃO EDUCATIVA EM VIGILÂNCIA DO DESENVOLVIMENTO INFANTIL COM ENFERMEIROS

EVALUACIÓN DE LA IMPLEMENTACIÓN DE UNA INTERVENCIÓN EDUCATIVA EN VIGILANCIA DEL DESARROLLO INFANTIL CON ENFERMEROS

Altamira Pereira da Silva Reichert[1], Maria Gorete Lucena de Vasconcelos[2], Sophie Helena Eickmann[3], Marilia de Carvalho Lima[4]

ABSTRACT

The objective of this study was to assess the difficulties experienced by Family Health Strategy nurses in implementing an educational intervention regarding developmental surveillance. A qualitative approach was used with the assistance of eleven nurses, who participated in developmental surveillance workshops in the context of Integrated Management of Childhood Illness. Data were collected from May to June 2009 and were analyzed on the basis of content analysis methodology, using the theme modality. Four thematic nuclei were identified: evaluation of the training course regarding developmental surveillance; difficult areas which hinder the application of the acquired knowledge; facilitating points provided by the course, and practice transformation based on the knowledge acquired during the training course. The study highlighted the urgency of incorporating contents that give priority to questions concerning the infants' developmental surveillance in undergraduate nursing education, as well as in the family health internship.

DESCRIPTORS

Child development
Child health
Family health
Pediatric nursing
Health education
Education, nursing

RESUMO

Esta pesquisa teve como objetivo avaliar as dificuldades e facilidades enfrentadas por enfermeiros da Estratégia de Saúde da Família durante o processo de implementação de uma intervenção educativa em vigilância do desenvolvimento infantil. A abordagem utilizada foi qualitativa, com onze enfermeiros que participaram de oficinas de capacitação em vigilância do desenvolvimento no contexto da Atenção Integrada às Doenças Prevalentes na Infância. Os dados foram coletados nos meses de maio e junho de 2009 e analisados a partir do método de análise de conteúdo, utilizando-se a modalidade temática. Foram identificados quatro núcleos temáticos: avaliação do Curso de capacitação em vigilância do desenvolvimento infantil; pontos dificultadores para aplicar os conhecimentos adquiridos; pontos facilitadores proporcionados pelo curso e transformação da prática a partir dos conhecimentos adquiridos na capacitação. Destaca-se a premência de incorporar conteúdos que priorizem questões voltadas para a vigilância do desenvolvimento infantil no ensino de graduação em enfermagem e na residência em saúde da família.

DESCRITORES

Desenvolvimento infantil
Saúde da criança
Saúde da família
Enfermagem pediátrica
Educação em saúde
Educação em enfermagem

RESUMEN

Investigación que objetivó evaluar las dificultades y facilidades experimentadas por enfermeros de la Estrategia Salud de la Familia durante la implementación de una intervención educativa de vigilancia del desarrollo infantil. Se utilizó abordaje cualitativo, con once enfermeros participantes de talleres de capacitación en vigilancia del desarrollo en contexto de la Atención Integrada de Enfermedades Prevalentes en la Infancia. Datos recolectados entre mayo y junio de 2009, analizados según análisis de contenido, modalidad temática. Fueron identificados cuatro núcleos temáticos: evaluación del Curso de Capacitación en Vigilancia del Desarrollo Infantil; Puntos de dificultad para aplicar los conocimientos adquiridos; Puntos de facilidad proporcionados por el curso y Transformación de la práctica a partir del conocimiento adquirido en la Capacitación. Se destaca el apremio por incorporar contenidos que prioricen cuestiones apuntando a la vigilancia del desarrollo infantil en la enseñanza de graduación de enfermería y en la residencia en Salud de la Familia.

DESCRIPTORES

Desarrollo infantil
Salud del niño
Salud de la familia
Enfermería pediátrica
Educación en salud
Educación en enfermería

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INTRODUCTION

With the reduction in infant mortality in developing countries, aspects related to children's well-being are becoming more central in health care, with efforts focusing on the surveillance of children's development[1]. This includes all activities related to the promotion of normal development and the early detection of developmental problems during children's primary health care. It is a continuous, flexible process, involving information from health care professionals, parents, teachers and others[2].

Longitudinal monitoring of the neuropsychomotor development of infants is fundamental, as this is a period of intense transition in human beings, with highly important changes being processed in short time periods, this being a stage characterized by acquisitions which will have lifelong repercussions. This surveillance process is crucial because in developing countries, the prevalence of psychomotor disturbances is estimated at being between 12 and 16%, a number which increases significantly if one includes behavioral and school difficulties[3].

Approximately 17% of children are developmentally or behaviorally handicapped, with conditions such as autism, mental retardation, attention deficit or hyperactivity disorder. However, less than half of these are identified before the child enters school - by which time, in some cases, the opportunity for treatment or intervention has already been lost, and the children's problems already firmly entrenched[4].

Taking into account the reality presented here and the fact that nurses are members of the team that works under the Family Health Strategy, the necessity was noticed for nurses to qualify in actions concerning the child developmental surveillance, due to the fact that many children who attend Family Health Centers (FHC) are at risk of developmental delays. There is evidence that in less affluent countries, more than 200 million children under five years old are developing below their potential, leading to poor educational achievement and, in the long term, low incomes, high fertility and inappropriate care for their own children, contributing to the cross-generational transmission of poverty [5].

In addition to this, the literature emphasizes the existence of a gap between health care professionals' knowledge and their ability to evaluate child development, a low performance being demonstrated in this activity[4]. It also highlights the existence of barriers to carrying out developmental surveillance, among which are health care professionals' lack of knowledge and insecurity in assessing neuropsychomotor development[6].

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In this situation, with multiple cases of children whose developmental delays went undiagnosed and others of children being sent too late to the early stimulation services for specialized treatment, the Pan American Health Organization (PAHO) decided to implant the Program for Child Developmental Surveillance in the context of the Integrated Management of Childhood Illnesses (IMCI)[7] so as to encourage health care professionals to evaluate neuropsychomotor development in children under two years old. For this, a training instrument was developed for training primary health care professionals in child development, using the IMCI methodology[8].

It was in this context that an educational interventions program was undertaken, with workshops for training in child developmental surveillance, to qualify nurses who work in the Family Health Strategy in João Pessoa in the State of Paraíba. Evaluation of knowledge and practice in child developmental surveillance was carried out before the workshops and four months after, with a view to ascertaining the program's effectiveness. This intervention provided an opportunity to analyze, with a qualitative approach, the training's repercussions in daily practice.

The study's objective was to evaluate what was difficult and what was easy for the nurses during the process of implementing the knowledge acquired in a program for training in child developmental surveillance, aimed at nurses working in the Family Health Strategy.

METHOD

The choice of the qualitative model was based on concerns which arose after workshops for training in child developmental surveillance in the context of the Integrated Management of Childhood Illnesses (IMCI). At that time, it became necessary to know what nurses' experience was like after the training, regarding what was difficult and what was easy about putting the knowledge acquired into practice.

Thus, the present study analyzed the discourses of nurses who had participated in the workshops for training in child developmental surveillance in the IMCI context, carried out in a Family Health Center in the third health district in the city of João Pessoa in the State of Paraíba.

The educational program consisted of an intervention of the before-after type, undertaken between the months of November 2008 and April 2009. In the first two months, three training workshops in child developmental surveillance were carried out, each with a timetable of 16 hours, spread over two days, with an average of 15 participants. The theoretical activities were carried out through classes, using active methodologies, with problematiza-

tion as the teaching-learning strategy, with the objective of motivating the nurses and raising their awareness.

To help in the assessment of the child's neuropsychomotor development, material was made available to the nurses, which consisted of tables indicating the steps to be taken during a consultation, and a kit containing simple, easily-obtainable objects. The kit was made up of a red pom-pom, six cubes of different colors, a cup, a rattle, a ball, paper and a wax crayon, a pot containing beads for assessing the child's pincer movement and a tape measure for measuring the cephalic perimeter. In addition to this material, the nurses received a folder containing different pictures of things the child would be familiar with (a girl, a flower, a bird, a dog and a car), to be used in cognitive evaluations during consultations. The course content was published by OPAS in 2005[9] and included in the content of the Integrated Management of Childhood Illnesses (IMCI) course.

Using the criteria of theoretical saturation for delimitation of the sample, and after a random selection, eleven nurses were interviewed. All had participated in all stages of the intervention program and continued to work in one of the Family Health centers in the third health district of the city of João Pessoa.

The instrument used for data collection was a semi-structured script, containing the following guiding questions: How would you evaluate the workshop for training in child developmental surveillance in the context of IMCI? What was easy or difficult for you in applying the knowledge learnt in the training in child developmental surveillance in practice? Based on the training workshop, what aspects motivated you to apply the knowledge in your daily practice?

The present study's period of data collection was May – June 2009. For carrying out the interviews, a time convenient for the nurse was scheduled at a Family Health Center. Each interview lasted from 10 to 30 minutes, which were recorded on an MP4 player, after the interviewee's authorization, so as to capture information indispensable for carrying out the study. It was attempted to undertake the interviews in a silent environment with privacy, and without external interference. To ensure the nurses' anonymity, the discourses were identified with a letter 'N' for 'Nurse', followed by the number, according to the sequence of the interview at the time of data collection.

The study was submitted to the Federal University of Paraíba's Research Ethics Committee under Protocol nº 0216, and also to the health Education Board of the town of João Pessoa, receiving a favorable verdict. The nurses, after being informed of the research's aim, signed the terms of Free and Informed Consent.

The data was analyzed using the technique of content analysis, of a thematic, cross-sectional type[10]. Each interview was processed separately, and, during the transcription, the decision was made to use the symbol (...) to represent the moment in which the speech was lifted from the original discourse.

RESULTS

The eleven participants were all female, with ages ranging from 28 to 49 years and between 7 and 23 years' experience since graduation. Regarding length of service in the Family Health Strategy, only one had 11 years of work, the rest having less than 9, coinciding with the period in which the Family health teams expanded in the city of João Pessoa.

Based on the analysis of the statements from the nurses researched, four central themes were identified, these being: evaluation of the Training Course in child developmental surveillance; points which made it difficult to apply the knowledge acquired; points provided by the course which facilitated matters; and the transformation of practice through the knowledge acquired during the training.

Theme 1: Evaluation of the training Course in Child Developmental Surveillance

Initially, the results pointed to the fact that, in the interviewees' opinion, the training in child developmental surveillance in the context of the Integrated Management of Childhood Illness (IMCI) was valued as a result of the application of an educational activity with excellent methodology, due to having started from the previous knowledge of the target public, motivating didactic material and competent facilitators concerning the educational process. On the other hand, it was emphasized that the course's length was short, considering its need for knowledge of the area – as shown in the statements below:

> (...) so I think that it was really good, in that it looked for what we knew, it was practical, the manual that you gave, the teaching material for us was succinct, and aimed at our practice (...) (N7).

> (...) we're accustomed to going and seeing what – a slide, some photographs, but here we had the chance to experience practice, which helps a lot, because doing is totally different to seeing and reading isn't it? The trainer, the facilitator, is very important. I think you were perfect in this, it was a new one for us, eh (N9).

> (...) the way it was given and the methodology used was great, there was no stress and it wasn't tiring, everybody was always motivated (N3).

> (...) The only part I thought was insufficient was the time. I think it should have been longer, because it was rushed (...) I loved the rest of it. The material, the teacher, the collaborators, the guidance counsellors, all highly competent, very good, what they were talking about was really good (N1).

Theme 2: Points which made it difficult to apply the knowledge acquired

With the introduction of evaluation of neuropsychomotor development in nursing consultations of children in primary health care attention, this become more time-consuming, leading the mothers to demonstrate dissatisfaction due to having to wait longer than usual for the child to be attended. This was because before the training, the majority of nurses had not carried out the child developmental surveillance, as shown by the statements below:

(...) the difficulty is most related to the pressure from the mother, to be seen so she can go home. (...) because they don't have the habit of coming to carry out childcare (...) (N4).

(...) We monitor the growth of the child, but not its development. So, there was a lack of support for us to put this into practice. Now, I felt difficulty because the mothers don't have much patience for waiting for the evaluation because of the exaggerated demand which we have for children in the center (...) (N7).

(...) but, in this way, what makes it harder is that it needs more time, you know? It's different, the consultation we used to do, observing growth, measuring and all, was fast (...) (N8).

Another aspect which the nurses thought made it difficult to systematically monitor the children had to do with the work environment, specifically, the precarious infrastructure in the Health Center and the excessive workload to which the health care professional is subjected.

(...) There was a certain difficulty owing to the multiple tasks we have, you know? For this (...) until you see that the room here isn't totally available, so, for me to carry out a task of this type.... The structure we have here isn't of the best, but even with what we have, we do it, we don't leave it!(N11).

(...) so another thing I think, is during the consultancy (...) I can't be dedicated to the care I'm giving, because I have to leave the room, to vaccinate, because I have to go out to take care of something else, and I don't stay there just with those mothers checking the growth and development that day, it's not just the G&D.(N1).

Although the training has provided a new way of attending the child, with instruments for assessing the neuropsychomotor development which aim to facilitate the nurse's work and systematize the consultation, the difficulty of dealing with these instruments - especially regarding memorizing the steps to be followed for evaluating the specific landmarks for each age range - can be seen in the discourses of some of the interviewees.

(...) now, I have difficulty with all the memorizing of the analysis of the boys at one month, two months, (...) there I have to be with that spreadsheet of yours to help me, because, because I really can't remember it (N2).

(...) I had difficulties, some difficulties with those markers, you know? (...) (N6).

(...) that little box that I have to be always looking at, so much so that I've stuck it on the medical records so I don't have to always have it out next to me (N9).

Theme 3: Facilitating Points of the Course

One facilitative aspect of the practice, considered by several of the nurses interviewed, is related to the material made available to help in the assessment of the neuropsychomotor development of the child; according to these nurses, the material provided practicality and ease in carrying out the children's neuropsychomotor evaluation, making it more systematic and of better quality, as may be observed in the statements below:

(...) the material which we can always be consulting when we're unsure, a thing which is always to be there, checking (...). (...) there with the Kit, we can do everything more easily, and the instruments, which is the main reason, eh? It makes the consultation much easier, much easier! (N1).

(...) What was easy was the instrument you made, wasn't it? Those little tables really helped us with wanting to improve the quality of the service and also to really assess what we hadn't been assessing, which was those neuropsychomotor matters. (N5).

(...) That little agenda, which is always by my side and which has helped me no end (...) (N6).

(...) it became more of a game, you know? I think it even strengthens the quality of the childcare in the mothers' eyes (...). (...) But, using the spoken instrument is one thing, it's another to turn up with a gaming instrument, which is a rattle, or a little cup.... so that there, it's not just an impression on me or the mother, it's really a qualitative leap, you know? They're visual aids which enchant people, apart from the question of quality, they enchant! (N9).

Another relevant aspect, made available by the training and identified in the nurses' discourses, is that with the acquisition of the knowledge about child developmental surveillance the nurses start identifying the developmental problems in the children they're attending, and from that, start guiding the mothers to stimulate the children to return for re-assessment, or to refer them early for neurological evaluation, which is a practice which was not done before the workshops.

(...) Until then, I had never referred a child (for neurological evaluation) you know? For the specialized service, and I had the opportunity to have a child and I referred her firstly to the pediatrician, who's a colleague of mine. So, this way, it's been positive, really beneficial (...),(...) we always guide people in relation to stimulation too, when the child doesn't do any activities like that (N3).

(...) The fact of applying what we learnt, it's….having the conditions to … there was a child who.. this was very grati-

fying, because it was satisfaction to be able to identify (...) We spotted it and, thank God, the other months, we had a positive response, we guided the stimulation and there were no problems at all. She stimulated the child and we got a good result. (N5).

(...) it used to have to be a really obvious thing for us to notice (...) now we have a way to guide and give, like this... describing what the points we see are, if there is any delay, if there is anything which we think needs assessing by a professional So, now I can refer the child with delays even if they're hypothetical! So, I can say then and there what I have found; it might be nothing, but I can refer the child anyway (N7).

Theme 4: Transforming practice based on the knowledge acquired

Health professionals who work in the Family Health Strategy are expected to develop their competencies, including different branches of knowledge so as to be able to attend individuals at different points of the life cycle. However, the burden of work health professionals are subject to makes it difficult to seek new knowledge, leading to shortcomings which compromise the care offered to clients. In this context, according to the nurses surveyed, the training brought together knowledge about child development, to the extent that it transformed their practice, due to their incorporating a scientific basis into the assessments of child development they made in the consultations, thus producing a qualitative leap in the care given to these children.

(...) Principally with the question of us also being... of having encouraged us to go a little deeper in the consultations (...). (...) because you're doing a job which is more... more kind of, improved in how it's done, even our performance, you know? Because it became more of a scientific thing, a thing you're evaluating with more criteria, you know? (N4).

(...) I think it broadened the scope of what we're doing, right? And even more professional too, I even feel better about monitoring these children, doing something more, that we didn't use to do. (N5).

(...) I liked it, you more than met my expectations because it wasn't just your work, it was our transformation (N9).

(...) To me it was a new experience, and I believe that I have improved a lot since this, because I needed to do a course like this. (...) it was a new thing and widened my abilities. (...) now, I can evaluate the developmental part better, so for me it added to my knowledge. (...) (N11).

Concerning the children's developmental surveillance being implemented, it may be observed that the mothers, who previously had not been very diligent, are content to see that their children are being attended better – and that this approval has had direct repercussions, in an increase in demand for childcare consultations.

(...) assessing the neuropsychomotor system now, applying all those procedures, well, we can see that the clients, they've got really interested, I mean the mother, you know? They're really interested in bringing their children here in the Family Health center. So I had to add a shift because the demand had gone up (N3).

(...) I think the mothers are much more satisfied. There was always a good demand for childcare, but, more than ever before, they don't miss a consultation. (N5).

(...) they're all coming to me and every day there are more of them. So, I'm happy. (...) So, I'm putting it into practice and every day I'm increasing the numbers, and the mothers are coming every month, really coming, not just for kids who are sick, but to monitor their growth, their development. (...) (N6).

With the new model of neuropsychomotor assessment, presented in the training, the nurses showed motivation and interest in using the development assessment instruments in all the consultations, mentioning zeal and satisfaction in filling them out.

(...) the quality of the consultation improved, the interest, including today when I'm going to start here, I get the material, it stays up here, my materials for doing the assessment (...) (N3).

(...) And - just for ourselves - we already have that enthusiasm to be filling it all out just right, everything all detailed and everything, and we feel more secure (...) (N4).

(...) Every day I'm doing childcare I apply it and use all the instruments. I couldn't do the childcare without it any more. (...) (N5).

For some nurses, this transformation was striking not just because of the fact that the consultation was being carried out on a scientific basis, but also because they started seeing the children with new eyes, in a more holistic way.

(...) This motivated us because before we didn't have it, you know? This practice, this new way of seeing the child, and today we have this new way of seeing (...) (N3).

(...) So this was the big advantage: a new perspective for these children who were escaping the priorities (N7).

DISCUSSION

Based on the interviews, it may be observed that the time allocated for the workshop was insufficient, bearing in mind the need which emerged for knowledge, needed by the nurses to work in line with the guidelines for the child's healthcare program. To improve this reality, the participants in the study suggested that the complete IMCI course should be made available. This shortcoming in training occurs because the qualification of professionals working with these clients (whose benefits may be observed in the short term by client satisfaction, and in the long term by the reductions in infant morbidity

and mortality) does not generate interest among health managers, which is reflected in the absence of training for health care professionals working in the Family Health Strategy[11].

To address this issue, the best way of deepening knowledge and the search for demands for knowledge in the area of children's health care is in the strategy of continuous education, due to this being shown essential to reduce the vulnerability of the infant population. For the learning to take place efficiently, however, it is fundamental for it to be based on the real needs of the professionals, such that it may be shifted into the workplace environment and considered a source of knowledge[12].

This becomes important because working in the Family Health Strategy requires that the health care professionals have basic knowledge about child development and that they should be alert for factors which influence this process and to possibilities for intervention, bearing in mind that the Family Health Center is the principal means by which primary health care is provided, and is the health system's gateway, having, as such, the power to resolve problems[12].

In addition to this, it is important that nurses be aware of their role in the promotion of child development, as it only in this way that they may be motivated to contribute favorably to the processes of children's developmental surveillance[13].

The nurses mentioned that, with the acquisition of knowledge, they felt satisfied as they found themselves being better able to carry out childcare consultations in a more complete way. This aspect is fundamental, because professional clinical performance and interaction with service users are factors which can influence the way in which the latter forge links with the Health Center, especially the mothers of children under two years old[14]. On the other hand, building links with service users is no easy task, principally when the health care professional has to cope with the psychological pressure resulting from the haste of the mothers who want their children seen.

The principal objective of child developmental surveillance is to monitor the child in such a way as to detect early on any developmental problems and send the child, as fast as possible, for the appropriate treatment, so as to avoid later harm. This is because early intervention in children with developmental alterations means that they do better in their studies, in work and can live independently – as well as avoiding problems like teenage pregnancy and delinquency[15].

In this context, it may be observed that, following training, some nurses managed to detect children with possible developmental delays and, according to their comments, took the necessary steps, referring them to pediatricians or advising the mother about stimulating the child and returning for assessment after a specified period, as advised in the manual for child developmental surveillance in the context of IMCI[9].

This attitude is commensurate with the guiding principles of childcare, bearing in mind that the assessment is the first step to safe monitoring, as it provides support for diagnoses and effective strategies for resolving problems which may arise[16]. In addition to this, by acting in this way, the nurses are not only doing what is expected of competent professionals, but are also acting in accordance with international guidelines, as called for by the American Academy of Pediatrics[17].

This being so, the nurses consolidate the principal objective of developmental surveillance, because the assessment of all children under two years old leads to the early identification of developmental disturbances, and hence to the possibility of determining appropriate interventions; and those who are diagnosed with delays may have a greater probability of following the same sequence as children with normal development.

This observation leads the authors to believe that the training achieved its educational function, by providing the acquisition of new knowledge to the participants in the study and by motivating them to apply the new content in practice. The authors know that the change in attitude happened also through the desire of the nurses to change their practice, because, from the perspective of the theory of meaningful learning[18], the individual has to be willing to learn meaningfully, that is, to relate the knowledge which she already has with what is to be learnt. Otherwise, she may learn in an automatic way, merely memorizing concepts in an arbitrary literal fashion, which leads to the content learnt being rapidly forgotten.

The possibility of initiating the process of meaningful learning to assimilate new knowledge presupposes that the individual has a positive predisposition to relate, in a non-arbitrary and substantive way, the new material to her cognitive structure, and that the learning material may be potentially meaningful to that person in particular[18]; it appears to the authors that the nurses corresponded to these presuppositions, as shown by their change of attitude.

This research's findings are in line with other studies in which the authors point out a change in attitude among health care professionals following training in evaluating child development, with an increase in the early detection of defects and referrals for timely intervention[19-20].

However, despite the nurses' satisfaction with the training and despite the motivation of applying the course content, this is not sufficient to ensure that all the nurses will carry out the surveillance of development, and – among those who incorporated the knowledge into

consultancies – how long the practice will be kept up. Regarding this aspect, the literature highlights, as factors limiting the quality of the work carried out under the Family Health Strategy, the great number both of people registered and of care and management activities which fall under the responsibility of the nurse, making the time available simply insufficient for holistic, humanized and individualized care[11].

CONCLUSION

The educational intervention provided a transformation in the nurses' practice, in incorporating child developmental surveillance into the actions carried out under the Family Health Strategy. This scenario is favorable to the prevention of poor health among children, bearing in mind that some of the children treated in the health centers are at risk of presenting developmental disturbances.

With training based on meaningful learning, the consultation became more scientific, systematic and playful, with consequent approval from the mothers, this being observed from the increase in demand for health care for the children. If, before, the majority of mothers had gone to the center only because of necessities for their children's health, or during vaccination campaigns, after the implementation of the developmental surveillance, they started taking the children for childcare consultations diligently and with satisfaction.

However, despite the facilitating aspects of the educational intervention, the authors defend continuous education as the best path to the improvement and continuity of surveillance of the development of children attended under the Family Health Strategy, as it is through this that the nurses will be motivated to seek responses to the varying problems that will arise during daily work.

The systematic surveillance of child development through a simple methodology, of low cost and easy applicability by Family Health Strategy professionals, like that in this study, can constitute an important means for the early detection of developmental defects and, consequently, their prevention.

In the light of the foregoing, the surveillance of development of children under two years old must be seen as a strategy capable of meeting the global needs of the child, in a holistic way, as only thus can the child be seen as a growing, developing being. Thus, it would facilitate the operationalization of developmental surveillance if this strategy were standardized, which would cause a qualitative leap in holistic care. Finally, the authors recommend residencies in Family and Child Health and the incorporation into Nursing undergraduate teaching of content which prioritizes questions geared towards the surveillance of child development.

Although developmental surveillance is fundamental to the promotion of children's health, there exists the possibility that nurses, in their daily routines, may prioritize other activities to its detriment. In this regard, it is important for there to be further research addressing the determinants of non-effectiveness of the surveillance of child development in nursing consultations, as well as involving the managers, so as to viabilize conditions such that health care professionals may implement actions of this nature.

REFERENCES

1. Ertem IO, Dogan DG, Gok CG, Kizilates SU, Caliskan A, Atay G, et al. A guide for monitoring child development in low and middle-income countries. Pediatrics. 2008; 121(3):e581-9.

2. Hall D, Blair M. From health surveillance to health promotion: the changing focus in preventive children's services. Arch Dis Child. 2006;91(9):730-5.

3. Earls MF, Shackelford H. Setting the stage for success: implementation of developmental and behavioral screening and surveillance in primary care practice-the North Carolina Assuring Better Child Health and Development (ABCD) Project. Pediatrics. 2006; 118(1):e183-8.

4. Centers for Disease Control and Prevention. Barriers to developmental screening according to pediatricians: results form AAP surveys of pediatricians [Internet]. Atlanta; 2008 [cited 2008 Apr 17]. Available at: www.cdc.gov/ncbddd/child/DSbarriersrpt.pdf

5. Grantham-McGregor S, Cheung YB, Cueto S, Glewwe P, Ricter L, Strupp B, et al. Developmental potential in the first 5 years for children in developing countries. Lancet. 2007;369 (6):60-70.

6. Ertem IO, Pekcici EBB, Gok CG, Ozbas S, Ozcebe H, Beyazove U. Addressing early childhood development in primary health care: experience from a middle-income country. J Dev Behav Pediatr. 2009;30(4):319-26.

7. Santos J, Fernandes S, Figueiras AC, Yehuda B. Implementación de AIEPI en Brasil: avances resultados y perspectivas. Noticias sobre AIEPI. 2003;9(1):13-5.

8. Figueiras AC, Souza ICN, Rios VG, Benguigui Y; Organização Pan-Americana de Saúde. Manual de vigilância do desenvolvimento infantil no contexto da AIDPI. Washington: OPAS; 2005.

9. Bardin L. Análise de conteúdo. 4ª ed. Lisboa: Edições 70; 2009.

10. Motta KMT, Queiroz MVO. Puericultura: concepções e prática do enfermeiro no Programa de Saúde da Família. Rev RENE. 2005;6(1):9-19.

11. Rodrigues ACS, Vieira GLC, Torres HC. A proposal of continuing health education to update health team professionals in diabetes mellitus. Rev Esc Enferm USP [Internet]. 2010 [cited 2010 Dec 14];44(2):531-7. Available at: http://www.scielo.br/pdf/reeusp/v44n2/en_41.pdf

12. Bortolote GS, Brêtas JRS. The stimulating environment for the development of hospitalized children. Rev Esc Enferm USP [Internet]. 2008 [cited 2010 Dec 14];42(3):422-9. Available at: http://www.scielo.br/pdf/reeusp/v42n3/en_v42n3a01.pdf

13. Pina JC, Mello DF, Mishima SM, Lunardelo SR. Contribuições da estratégia de atenção integrada às doenças prevalentes na infância ao acolhimento de crianças menores de cinco anos. Acta Paul Enferm. 2009;22(2):142-8.

14. Lung FW, Chiang TL, Lin SJ, Lee MC, Shu BC. Child developmental screening instrument from six to thirty-six months in Taiwan birth cohort study. Early Hum Dev. 2010;86(1):17-21.

15. Alkon A, To K, Makie JF, Wolff M, Bernzeig J. Health and safety needs in early care and education program: what do directors, child health records, and national standards tell us? Public Health Nurs. 2010;27(1):3-16.

16. American Academy of Pediatrics. Identifying infants and young children with developmental disorders in the medical home: an algorithm for developmental surveillance and screening. Pediatrics. 2006;118(1):405-20.

17. Ausubel DP. The psychology of meaningful verbal learning. New York: Grune & Stratton; 1963.

18. Schonwald A, Huntington N, Chan E, Risko W, Bridgemohan C. Routine developmental screening implemented in urban primary care setting: more evidence of feasibility and effectiveness. Pediatrics. 2009;123(2):660-8.

19. Jee SH, Szilagyi M, Ovenshire C, Norton A, Conn AM, Blumkin A, et al. Improved detection of developmental delays among young children in foster care. Pediatrics. 2010; 125(2):282-9.

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