HEALTH PROFESSIONALS' PERCEPTION OF THE BRAZILIAN PROGRAM TO COMBAT VITAMIN A DEFICIENCY

Percepção de profissionais de saúde sobre o programa de combate à deficiência de vitamina A

Percepción de los profesionales sanitarios sobre el programa de combate a la deficiencia de vitamina A

Original Article

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ABSTRACT

Objective: To identify the health professionals' perception of the National Vitamin A Supplementation Program. **Methods:** Exploratory, descriptive and qualitative study, conducted with 15 health professionals selected by intentional sampling, who worked in Primary Health Care Units and maternity units of the city of Campina Grande, Paraíba, Brazil, between the months of February and May 2010. For data collection, a semi-structured interview was applied, conducted by guiding questions. Data was submitted to Content Analysis in the thematic mode. After analysis, three thematic categories emerged. **Results:** The interviewees' perception was focused on the micronutrient supplementation to the detriment of other relevant actions to the program. The lack of qualification/training, the fragmented work process in the teams, the irregularity of the capsules supply, and the lack of educational and technical material on the program were cited as hindering points, and are liable to contribute to non-understanding of its proposal, as a set of articulated actions for vitamin A deficiency combat and/or control. **Conclusion:** The results point out the need for a critical and reflective training process for the health professionals, in addition to the production and spread of educational material aiming at improving the Program and its dissemination, at the technical rules standardization, and the regularity of supplementation. It is suggested that further studies be developed involving other actors within the Program (mothers, managers), with the aim of understanding other factors that might contribute to the program in the achievement of the expected impacts.

Descriptors: Vitamin A Deficiency; Qualitative Research; Health Services.

RESUMO

Objetivo: *Identificar a percepção de profissionais que atuam na área de saúde sobre o Programa Nacional de Suplementação de Vitamina A.* **Métodos:** *Estudo exploratório, descritivo, de natureza qualitativa, realizado com 15 profissionais de saúde selecionados por amostragem intencional, que trabalhavam em Unidades Básicas de Saúde e maternidades no município de Campina Grande/PB entre os meses de fevereiro e maio de 2010. Para a coleta de dados, utilizou-se a entrevista semidirigida, conduzida por questões norteadoras. O material foi submetido à Análise de Conteúdo, na modalidade temática. Após análise, emergiram três categorias temáticas.* **Resultados:** *A percepção dos entrevistados mostrou-se focada na suplementação do micronutriente em detrimento de outras ações pertinentes ao Programa. A falta de capacitação/treinamento, o processo de trabalho fragmentado nas equipes, a irregularidade no fornecimento das cápsulas, a ausência de material educativo e técnico sobre o Programa foram citados como pontos dificultadores e podem contribuir para a não apreensão de sua proposta, como um conjunto de ações articuladas para o combate e/ou controle da deficiência da vitamina A.* **Conclusão:** *Os resultados sinalizam a necessidade de um processo de capacitação crítico e reflexivo para os profissionais de saúde, além da produção e disseminação de material educativo, com vista ao aprimoramento do Programa e sua ampla divulgação, à padronização de normas técnicas e à regularidade*

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Received on: *11/21/2015*
Revised on: *01/16/2016*
Accepted on: *02/17/2016*

na suplementação. Sugere-se que novos estudos sejam realizados envolvendo outros atores do Programa (mães, gestores), com o objetivo de compreender outros fatores que possam contribuir para que o Programa obtenha o impacto esperado.

Descritores*: Deficiência de Vitamina A; Pesquisa Qualitativa; Serviços de Saúde.*

RESUMEN

Objetivo: *Identificar la percepción de profesionales que actúan en el área de la salud sobre el Programa Nacional de Suplemento de Vitamina A.* **Métodos:** *Estudio exploratorio, descriptivo y de naturaleza cualitativa realizado con 15 profesionales sanitarios elegidos por muestreo intencional y que trabajaban en Unidades Básicas de Salud y maternidades del municipio de Campina Grande/PB entre los meses de febrero y mayo de 2010. Para la recogida de datos se utilizó la entrevista semidirigida que fue conducida por cuestiones norteadoras. Se realizó el Análisis de Contenido en la modalidad temática. Tras el análisis emergieron tres categorías temáticas.* **Resultados:** *La percepción de los entrevistados estuvo centrada en el suplemento del micronutriente en vez de otras acciones del Programa. La falta de capacitación/entrenamiento, el proceso de trabajo dividido en equipos, la irregularidad del suministro de las capsulas, la falta de material educativo y técnico sobre el Programa fueron citados como aspectos que dificultan y que pueden contribuir para la no adquisición de su propuesta como un grupo de acciones articuladas para el combate y/o control de la deficiencia de la vitamina A.* **Conclusión:** *Los resultados señalan la necesidad de un proceso de capacitación crítico y reflexivo para los profesionales sanitarios además de la producción y diseminación de material educativo para el perfeccionamiento del Programa y su amplia divulgación, la estandarización de las normas técnicas y la regularidad del suplemento. Sugiérese que se hagan nuevos estudios involucrando otros actores del Programa (madres, gestores) para la comprensión de otros factores que puedan contribuir para el impacto esperado del Programa.*

Descriptores*: Deficiencia de Vitamina A; Investigación Cualitativa; Servicios de Salud.*

INTRODUCTION

Vitamin A deficiency (VAD) is a nutritional deficiency deemed a public health problem that mainly affects economically disadvantaged countries. It is associated with poverty, the development of infectious processes, and restricted access to food sources of vitamin A. The World Health Organization (WHO) estimates that around 19 million pregnant women and 190 million children present VAD, with Africa and the Southeastern Asia as the most affected regions. Prolonged VAD can lead to disorders in the visual system, cell differentiation, epithelial integrity, production of red blood cells, immunity and reproduction[1,2].

Brazil is considered a risk area to subclinical VAD[3,4]. According to the results of the latest National Survey on Demographic and Health of Children and Women (*Pesquisa Nacional de Demografia e Saúde da Criança e da Mulher - PNDS*), 17.4% of Brazilian children had VAD in 2006, with higher rates in the Northeast (19%) and Southeast (21.6%) regions of the country[4]. In turn, a literature review also pointed out the problem posed by the VAD in children to the public health in Brazil[5]. A similar result was systematized for Brazilian children attending day-care centers[6], and more recent empirical data evidences the deficiency enduring trend[7-10].

The National Program for Vitamin A Supplementation (*Programa Nacional de Suplementação de Vitamina A - PNVITA*) was established by Ordinance 729, anacted by the Ministry of Health of Brazil on May 13, 2005, and has been trying to honor the country's commitment to the United Nations to control the VAD and its consequences. The Program is intended to reduce and control the deficiency in 6- to 59-month-old children and mothers in the immediate postpartum period[3]. It is currently undergoing expansion by means of the Brazil Without Poverty Plan (*Plano Brasil sem Miséria*)[11].

Even though VAD repreesents an important nutritional problem in the Brazilian nutritional scenario, few studies in the country have focused on the evaluation of the Program process and results[12-14]. In Bahia, an assessment with a multidimensional approach, based on the structure-process-outcome triad[12], observed that most of the families that received the benefit reported not having any knowledge about vitamin A. Other shortcomings were identified, regarding the regularity in the supplement distribution, properly trained human resources, and informational materials produced and distributed to publicize the Program.

In Paraíba, the literature presents two studies[13,14] performed within the evaluation context of the PNVITA. In the first study[13], which considered the perception of those responsible for children under five years who benefited from the program, there was a low percentage of knowledge of PNVITA, as well as of vitamin A. In the second study[14], whose approach was predominantly quantitative, it was identified that most services had no educational or informational material available in the Primary Health Care Unit (PHU), the access to vitamin A capsules in some services was slow and insufficient, and health professionals lacked qualification/training. It is assumed that the results achieved by PNVITA can be affected by various actors, in addition to aspects concerning its structure (training, technical equipment, capsules) and operation, which can be decisive for the difficulties previously indicated[14].

In this sense, it is recognized the relevance of VAD as a public health problem, as well as the importance of health

professionals in the effective performance of the VAD prevention and control program.

Faced with this context, the question is raised: how do health professionals perceive the National Program for Vitamin A Supplementation? This study aimed at identifying the perception of professionals working in the health area of the National Program for Vitamin Supplementation A.

METHODS

This is an exploratory, qualitative, descriptive study, conducted in PHUs and maternity hospitals in the city of Campina Grande, PB, between the months of February and May 2010.

The eligible population was composed of health professionals (doctors, nurses) in addition to nursing technicians and community health workers involved in the operation of the National Program for Vitamin A supplementation (PNVITA) and with at least one year of work experience. The sample selection was intentional[15], with number of participants defined by the criterion of theoretical saturation[15], which occurs when, during data collection, it is observed that new elements to support the theory, desired or possible, are no longer inferred from the research field. Using this criterion, the study was conducted with 15 professionals from eight Primary Health Care Units, randomly chosen and representative of the municipality's Family Health Strategy.

The city of Campina Grande is located in the Agreste of Paraíba, in the eastern part of the Borborema Plateau. Its urban area encompasses 87.8 km^2 and its rural area, 55.6 km^2. In 2010 it was home to an estimated population of 385,276 inhabitants[16]. The city has a health services network with 58 Primary Health Care Units, a public maternity hospital, a philanthropic hospital and two private hospitals with referall maternity services covered by the National Health System (*Sistema Único de Saúde - SUS*), and one private clinic[17].

Data collection was performed through semistructured interview[15], with four guiding questions: Tell me what you know about vitamin A; What do you know about the vitamin A deficiency? What is your perception of the National Program of Vitamin A Supplementation? In your opinion, what are the facilitating and inhibiting factors in the Program operation?

To characterize the respondents, data was collected with the variables gender, age, level of education, professional trainning, and length of time performing in the service. The interviews took place in closed rooms, assigned by the PHU teams and maternities, with average time of 40 minutes and recorded on audio device.

The study used the content analysis in the thematic mode[18]. The steps of this technique are listed according to the author, who arranges them in three stages: 1) pre-analysis, 2) exploration of the material and 3) treatment of results, inference and interpretation. Pre-analysis is the phase in which the material to be analyzed is organized, being rendered operational, with systematization of the initial ideas. The exploration of the material constitutes the second phase, which consists in the definition of categories (coding systems) and the identification of recording units (units of meaning for coding, corresponding to the content segment to be taken as the basic unit, for categorization and frequency counting) and context units in the documents (understanding unit to encode the recording unit corresponding to the message segment, in order to understand the exact meaning of the recording unit).

The exploration of the material is the phase of analytical description, which relates to the corpus (any collected textual material) undergoing a thorough examination, guided by the hypotheses and theoretical frameworks. The third phase concerns the treatment of results, inference and interpretation. In this phase the transcript is condensed and the information is highlighted for analysis, culminating in inferential interpretations; it is the moment for intuition, reflective and critical analysis[18].

From the interviewees' statements and based on the Content Analysis, it was possible to apprehend the following thematic categories: limited knowledge of vitamin A and the disorders resulting from its deficiency; Program (in) visibility; facilitating and inhibiting factors in the program operation.

The research project was approved by the Research Ethics Committee of the State University of Paraíba, in compliance with the provisions of Resolution 466/12 of the National Health Council[19], which regulated the research involving human beings in Brazil, with CAAE 0050.0.133.000-08. The interviews were conducted after signing the Informed Consent Form, with the guarantee of preserving the participants' anonymity; they were identified by using the letter "P" and increasing numbers from 1 to 15.

RESULTS AND DISCUSSION

This topic presents the data related to the characterization of the study participants, followed by the themes that emerged from the study.

Characterization of the participants

The participants were 15 health professionals, 13 working in the BFHU and two in municipal hospitals, comprising two doctors, four nurses, three nursing techniques and six community health workers. The

respondents were predominantly women, aged 28 to 52 years, with education level ranging from high school and higher education. As regards the professional's length of time working in the PHU/maternity hospital, most had up to five years of activity (n=11).

The speeches and the grouping of ideas, analyzed according to the purpose of the study, gave rise to three categories that represent the health professionals' context of understanding, awareness and participation in the PNVITA.

Limited knowledge about vitamin A and the disorders resulting from its deficiency

This category, the limitation in the knowledge of the micronutrient vitamin A, which was perceived in the speech of some professionals in this study, can interfere with the actions for control and prevention of this micronutrient deficiency.

> *"What I know about it is that it's good for your vision ... I know it strengthens the immune system in some way ... That's what I know!" (P8)*
>
> *"It helps vision ... And when the mother takes it, it goes to the baby, when breastfeeding ..." (P13)*
>
> *"[...] As I told you, that the vitamin be related to the female patient's hemorrhagic or vision status, or else to the newborn's..." (P12)*

Other vitamin A functions listed showed uncertainty traits that permeate the knowledge of professionals who work in the Program, performing the supplementation and dosage monitoring.

> *"[...] it reduces problems regarding the child's vision, prevents blindness ... It decreases the incidence of diarrhea and respiratory infection and helps the child's development and growth. Other things that I, so to speak, I know superficially, don't know if it's certain, is that it's good for your hair, your nails. Not sure!" (P5)*

These findings are similar to those found in previous studies[12,13]. Consistent with such reality, the Ministry of Health has been seeking a thorough review of the Program operational logic, proposing changes in order to sensitize professionals and improve its dissemination[20]. These strategies are important because, in populations affected by VAD, supplementation may lead to a 24%-reduction in the overall risk of mortality from diarrhea and 28%-reduction in all-cause mortality, and may reduce by 45% the number of HIV-positive children[3].

Lack of knowledge on vitamin A is also perceived in the professionals" speeches, as they express concern about the possibility that some children receiving supplementation present hypervitaminosis.

> *"I've already heard that vitamin A causes... pressure, it increases cerebral pressure and ... that's all. In healthy children ... there's not much need for it, no." (P10)*
>
> *"You may have brain damage. At a high level, it also causes damages." (P9)*

Clarifications concerning this issue are extremely needed. Vitamin A supplementation in areas where VAD is a public health problem represents an essential strategy for increased survival of children under five years[1-3]. It is worth noting that supplementation of this vitamin might produce symptoms such as bulging fontanelle, headache, dizziness and vomiting, but these occur in a very small percentage[1] when the recommended criteria, such as age, dose, interval and groups[1,3] are respected.

Other effects, such as the teratogenic ones, are assigned to the retinoic acid, not to retinol, which is the form administered in supplementation. In addition to the recommendation to be specifically given to the woman during the maternity stay[1,3].

The PNVITA has a variety of actions for prevention and control of VAD, with the administration of supplement deemed only a short-term action. Knowledge of Vitamin A is important for the professional who works within the Program to be able to recognize the benefits of supplementation and contribute to a critical practice, consistent with the expected impact[1,3].

(In)visibility of the Vitamin A Program

This category addresses the weak in relation to the PNVITA and its target audience, noticeable in the professionals' speech, when asked about the knowledge of the program.

> *"Actually, I didn't even know this Vitamin A Program existed, [didn't even know] that it had such an importance, no." (P15)*
>
> *"[...] To be given to children after they're six-months-old ... Up to one year, right? Up to two? Up to two years!" (P2)*
>
> *"[...] Now, see, it's not the mother, it's the postpartum woman that's given it, who is being given it following the delivery..." (P7)*

These results corroborate the ones obtained in other studies[12,13]. The situation found is critical, not only regarding the specific situation related to the importance of training, but also concerning the need to track changes in the Program execution, such as the inclusion of postpartum women in the target population group and the Child Health Record. Training on the PNVITA is essential to ensure Program coverage and operation in compliance with its

proposal. It is important that professionals know and use the operational materials and others produced by the General Coordination of Food and Nutrition of the Ministry of Health, available on the website of this segment [3,13,14].

Facilitating and inhibiting factors in the Program operation

This category evidences some hindrances and facilitating aspects listed in the development of the Program activities.

Among the limitations, there is the fragmentation of the working process, revealed in the following statements:

> *"We only monitor the patients regarding tetanus; therefore, the ones on the vitamin A Program, we're not acquainted to that, we don't know how it's going. Who knows about it, in this case, is the nurse and the nursing assistant." (P1)*

> *"[...] There's nothing like us having sit, having even met the technician... [...]. Unless it has been done with other team members but with the technicians [...]. The technicians are the ones who, most of the times, handle and deliver the Vitamin A, in almost 100% of the units ..." (P6)*

It is perceived, in the speeches, that the professionals' work process maintains a Taylorist logic of division and organization of activities, as identified by other researchers[20]. Such circumstances hamper the management and the health work process, as well as the Family Health Strategy effectiveness, which implies teamwork and organized interaction among the professionals. A severe wearing and increased precariousness of health work are thus produced, which have been pointed as major obstacles to the development of public services in Brazil[21,22].

This scenario requires critical and reflective positioning on the part of the professional, necessary to allow changes arising from the gaps identified in this process. The health professionals' critical-reflective performance may contribute to the development of strategies required for qualified health care practice. In this sense, continuing education represents an important tool, not only for the acquisition and improvement of knowledge, but also for the development of critical stance, self-assessment, self-education and self-management[23].

Among the factors discussed, the working conditions were pointed as important limitations associated with the development of actions.

> *"[...] That we could at least receive information, if training is not possible, at least receive some manual, something for us to have a question cleared up." (P10)*

> *"Sometimes it's missing, especially vitamin A 100, the Unit always runs out of it, but we're always seeking to deliver it." (P6)*

This perception reflects the reality of public health services in the country, characterized by stagnation related to the service network restructuring and by the inadequacy in relation to operational materials and supplies[24]. This is a troublesome situation, since the adequacy of the structure is essential for a good working process, with positive effects on management and working conditions[20,24].

Another factor perceived as a hindrance to the Program development was the lack of qualification/training, as follows:

> *"To be honest, we carry out the management, but we have no information at all. It's rather hard for us to pass it on to people who are willing to learn, even to the moms, you see?" (P12)*

> *"I'm afraid of these programs with a top-down orientation. And we operate it without knowledge, because I think that, when you finish this business, you'll see that neither the nurses nor the nursing assistants know why vitamin A is delivered. And all they do (the managers) is to chase us up, because we are demanded to do it! We're chased up to deliver vitamin A, otherwise the vaccine schedule gets delayed. Why? The benefit? What could it cause?" (P9)*

On the other hand, when the professionals manage to take part in some educational activity, the use of the methodology developed is another issue observed:

> *"The courses we take are all virtual courses, right? So you want to have your own pen drive to copy the lessons, which are not directed to the construction of knowledge, it's that traditional methodology of lame university." (P4)*

These results converge with recent reviews that highlight the lack of training as a barrier to the development of actions in the context of the Family Health Strategy, such as growth monitoring[25] and filling out the Child Health Record[26]. In this sense, the National Policy of Permanent Education in Health is an indispensable resource for the transformation of concepts and practices of the health services workers, who are regarded reflective actors, builders of knowledge and alternatives for action[27]. Nevertheless, what is observed in the implementation of policies or health programs are educational or training activities with prescriptive actions that prioritize expertise and disregard the capabilities, limitations and local possibilities[28]. This reality is also represented in the context of the PNVITA, with performance of specific actions, rather than being inserted into a public policy of health promotion, with losses in important practices such as nutrition education[29].

Prompted to discuss the facilitating points of the program, the professionals have not made many comments, stating only that the oral administration of capsules is easily accepted by the population. When asked for suggestions for the improvement of the program, they unanimously pointed out the need for qualification/training and dissemination, which corroborate the results previously discussed.

> *"[...] Training for health professionals and, then, enhance dissemination... about the importance of this vitamin, because I think it's not." (P3)*
>
> *"I've never done a study on vitamin A, no, because when we enter, they never include vitamin A to frequent monitoring." (P11)*

The lack of training on the part of the health professionals, identified in the reports, may pose a negative effect on the implementation of the necessary actions of the Program. Among professionals and health management, this issue should give rise to the need to ensure the expansion of knowledge on the matter VAD and the the need foor actions that must be agreed by the municipalities, states and Ministry of Health[1,2,3,5].

FINAL CONSIDERATIONS

The study shows that the appropriation of technical knowledge about vitamin A and the deleterious effects of its deficiency is limited. These health professionals' perception of the PNVITA indicated the supremacy of administration of vitamin A supplement doses as an isolated action.

The lack of qualification/training, the fragmented work process in the teams, the irregularity of the capsules supply, the lack of educational and technical material, cited as inhibiting factors, may contribute to non-understanding of the Program proposal as a set of articulated actions to control the VAD.

Therefore, the results of this study indicate the need for qualification/training of the health professionals. It should be emphasized that such qualification needs to envision an integrative practice, legitimizing the beneficiaries' rights and their interest in the Program.

It is suggested that further studies be conducted involving other actors in the Program, aiming at understanding, from their intersection areas, other factors liable to hinder its impact.

ACKNOWLEDGEMENTS

To the professionals who participated in the study and the State of Paraíba Foundation for Research Support (*Fundação de Apoio e Pesquisa do Estado da Paraíba - FAPESQ-PB*).

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