

Vitamin A-Related Policies in Iran: Document Analysis

Abstract

Background: There are one-third of children in the world with Vitamin A deficiency. The prevalence of vitamin deficiency in children aged 15–23 months in Iran has increased 18 times and in rural areas. The present article aims to an analysis of related documents to the existing policies on this vitamin in our country. **Materials and Methods:** This study is a descriptive study using a quantitative content analysis approach to analyze nutritional policy documents. **Results:** We extracted six themes at the first stage of analysis (based on common policies in the world), which were reduced to two final themes: “Direct interventions” and “Indirect interventions.” There were also six subthemes and eight issues. **Conclusions:** It seems that policymaking must revise these documents and also making new policy decision with more emphasis on micronutrient.

Keywords: Analysis, policy, Vitamin A, nutrition Policy

Introduction

There are approximately 125 million preschool children with Vitamin A deficiency (VAD).^[1] This number includes one-third of children.^[2] VAD is the leading cause of preventable childhood blindness and increases the risk of death from common childhood illnesses such as diarrhea.^[3] Vitamin A is one of the most public health concerns.^[4] We must consider vitamin deficiency as an essential health issue in the last 10 years, given the new evidence for the increasing prevalence of vitamin deficiency, especially in children.

Furthermore, the prevalence of vitamin deficiency in children aged 15–23 months in Iran has increased 18 times according to the Pura study, which in rural areas (21.8%) VAD is significantly higher than urban areas (16.8%) in children aged 15–23 months.^[5]

There are several programs to reduce VAD. These programs divided into food-based strategies (diet, fortification, education), supplementation, and health interventions (breastfeeding, measles immunization).^[6] Decisions on the appropriate interventions depend on deficiency rate, disease patterns, and affective factors such as ecology, community organization, political support, and access to health services.^[7]

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It is necessary to analyze the existing Vitamin A policies to reduce the prevalence of deficiency and its damage in our country and change it if necessary. The increasing emphasis on the need for evidence-based policy indicates the continuing influence of the “modernist” faith in progress informed by reason. Policymakers should pay more attention to developing a sound evidence base for the policy through long-term impact evaluations of policies and programs using “multi-method” approaches, including qualitative and quantitative methods.^[8] Organizational and institutional documents have been a staple in qualitative research for many years. In recent years, there has been an increase in the number of research reports and journal articles that mention document analysis as part of the methodology.^[9]

The present article aims to an analysis of documents is related to reducing the prevalence of Vitamin A to find out how much this policy has been considered by politicians and to what extent is the conventional approaches in the world aimed at reducing vitamin deficiency in these documents? Also, how much there is an executive guarantee.

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Materials and Methods

This article is a descriptive study using a directed quantitative content analysis approach to analyze nutritional policy documents, using deductive thematic content analysis of these documents. The themes were based on global strategies to decrease VAD according to Scott's criteria; we searched for nutrition documents on internal websites. The criteria for entering the documents were the national policy documents created by the Ministry of Health and Medical Education (MOHME). Scott (1990) has formulated quality control criteria for handling documentary sources. These are authenticity, credibility, representativeness, and meaning. Authenticity refers to whether the evidence is genuine and from implacable source; reliability refers to whether the evidence is typical of its kind; representativeness refers to whether the documents consulted are representative of the totality of the relevant documents, and meaning refers to whether the evidence is clear and understandable.^[10] The included materials are described in Table 1.

Several times the research team reviewed the documents based on the goals of the research. Afterward, they primarily conducted coding of all documents. Next, the first researcher puts Initial codes on the main themes based on the study's Conceptual framework and current programs in the world. After that, the research team agreed on the data analysis process, and finally, the coding instruction was prepared-two researchers who coded all documents and re-classified themes by using the coding instruction. After the researchers performed the coding, the codes were reviewed by the research team. Finally, the research team agreed on the final codes and themes. MAXQDA 10 software was used to organize and analyze the data.

Results

In this study, MOHMEs policy documents related to malnutrition and reducing the prevalence of VAD were analyzed. Ten documents entered the present study.

Significantly, the most important and comprehensive document that points to reducing prevalent VAD policy was the National Document on Nutrition and Food Security. In this study, the documents were divided into three categories: (1) Documents pointing to food insecurity or policies to help reduce the prevalence of VAD. (2) Documents that directly refer to VAD and micronutrients. (3) Documents that do not refer to Vitamin A policies [Table 1].

As illustrated in Table 2, the research team extracted six themes at the first stage of analysis (based on Common policies in the world), which were reduced to two final themes: "Direct interventions" and "Indirect interventions." There were also six subthemes and eight issues.

Theme 1: Direct interventions

This theme refers to the direct interventions associated with policies reducing the prevalence of VAD. Findings related to this theme are summarized under four subthemes: Diet modification, fortification, supplementation, and agriculture.

Diet modification

There are two issues, food availability, and education, in this subtheme.

Food availability

The national document for the development of multi-food security and nutrition points to the cause of food availability such as agricultural production quantity, not enough attention to produce nutritious foods production, high percentage of products in low quality, inconsistency of food products in industries and nutritional needs of society, lack of physical access to fresh food, especially fruits and vegetables, along with reduced economic power and increasing the demand for fruits and vegetables due to inactivity, stress, and pollution.

To that end, this document has proposed some goals to increase food availability, such as Determining the annual

Table 1: List of analyzed documents in this study

Documents pointing to food insecurity or policies to help reduce the prevalence of vitamin A deficiency	Documents that directly refer to vitamin A deficiency and micronutrients	Documents that don't refer to vitamin A policies
Decisions of the High Council on Health and Food Safety	National Document for the Development of Multi-Food Security and Nutrition	Research priorities of the Deputy Minister of Health of the Ministry of Health, Treatment and Medical Education 1395
Program on promoting culture and nutrition literacy	National Document on Nutrition and Food Security (2012–2013)	
Planning and organizing research on nutrition science and food industries	Research priorities of the Deputy Minister of Health of the Ministry of Health, Treatment and Medical Education 1394	
constitution of national nutrition and food technology research institute	Food composition and health	
Research priorities of the Deputy Minister of Health of the Ministry of Health, Treatment and Medical Education		

Table 2: The thematic framework explaining the themes, subthemes

Theme	Subtheme	Issues
Direct interventions	Diet modification	Food availability education
	fortification	
Indirect interventions	Supplementation	Agricultural policy, soil enrichment
	Agriculture	
	Health interventions	Breastfeeding
	Cultural	secure and control of micronutrients Improving the organizational capacity of the PHC network Food culture

primary health care (PHC)

food poverty line identify the community below the full range of food poverty determining and formulating the type and mechanism of community support below the annual food poverty line, provide minimum food security requirements for low-income groups, establish intensive care units for severely malnourished children, identifying malnourished households due to poverty and crisis to distribute food packages needed by vulnerable people. Moreover, a 20% increase in the population's access to fruit and vegetable markets. Program 17 in National Document on Nutrition and Food Safety (2012-2013) refers to the creation of support programs to increase access to poor and vulnerable groups.

The combination of food and health records points to increase the average daily consumption of fruits, vegetables, milk, and dairy products in households by 20% to the end of the program.

Education

In National Document for the Development of Multi-Food Security, in the gradual and relative elimination section of traditional food from the table, mentioned that lack of a food guide in the country has led to a lack of coordination in public education programs. Including problems in Deputy of Education Ministry of Health are noncompliance of nutrition education with the needs of society, lack of appropriate training programs for specialist training in food and nutrition specialty including nutritional anthropology, nutritional epidemiology, food economics, and nutritional economics. Improving the nutritional awareness levels amount of 25% in different age groups is one of the quantity goals in this document.

In this document, several educational methods are mentioned. Of course, not with the direct purpose of reducing the prevalence of VAD, execution systems can be used to reduce vitamin deficiencies. These solutions include using the country's rural cooperative network to cooperate in nutrition education, information orientation, balanced nutrition training by Secretariat of Supreme Council for Health and Food Security, Attracting the cooperation of organizations and tools of information and training at the national, sub-national and regional levels, use of PHC

network in nutrition and health education, production and distribution of TV educational teasers, preparation and printing of suitable educational materials for public education, training technical officials and factory managers, health-care workers and employees of another office, alignment of educational programs and general advertising with scientific facts, focus policies and educational activities on food and nutrition, centralized monitoring of informative and advertising programs related to food and nutrition, especially in the mass media, using the cultural and traditional contexts of society to educate and improve the level of nutritional literacy, orienting academic education related to food and nutrition and tailored to the realities and needs of society, training and retraining of health workers, employees of other departments in the field of proper nutrition.

One of the strategic goals of the food security document is to increase the nutritional literacy of target groups by at least 50% of the base year. Furthermore, one of the goals mentioned in the composition and food health document is to promote the culture and nutritional literacy of the target groups by 10% of the current situation.

Program on promoting culture and nutrition literacy document, educational goals are quantitative. These goals include increasing the nutritional awareness of people in the community about the principles of proper nutrition up to 20% of the current situation. Increase parental nutritional awareness about child growth and nutrition monitoring up to 30% of current status, increasing the diversity and number of IRIB programs to promote food culture and literacy by 30% and increasing the awareness of policymakers about nutrition by 20% of the current situation. Furthermore, a 15% increase in attitudes improving and practices of different social groups about proper nutrition are considered.

Fortification

Program 14 in the National Nutrition and Food Safety Document (macro-interventions and priority programs) to food and food policy policies and guidelines (enrichment of staple foods with an emphasis on disadvantaged and vulnerable groups) considering sensitivity Refers to

ethnic, cultural, religious and food allergies. One of the strategic goals in this document is determining the task and establishing fortification, strengthening, and expanding fortification of micronutrients such as iron, zinc, Vitamin A, and Vitamin D in the food industry.

Fortification is one of the significant policies in the national document for the development of multi-food security and nutrition.

In the document of research priorities of MOHME (1394), directly, point the effectiveness and feasibility of the oil enrichment program with Vitamins A and D.

Supplementation

Research priorities of MOHME (1394) mentioned the evaluation of micronutrient supplements such as Vitamin D, A, and iron in children aged under 2 years in health networks of the country or province.

National document for the development of multi-food security and nutrition advises on supplementary programs for vulnerable groups.

The national document for the development of food and nutrition development has encouraged and supported the production and consumption of nutritional supplements and supplements to help vulnerable groups.

Agriculture

In light of document analysis, this sub-theme points to agricultural policies and in particular, home gardens.

Agricultural policy

In the national document for the development of multi-food security and nutrition, increasing access to food through the development and expansion of organizations and the private sector involved in facilitating physical access to fruits and vegetables in large cities, promoting greenery and its consumption in villages, support, and development of greenhouse crops, Support for the adequate and timely supply of agricultural inputs are the significant policies.

Furthermore, the increase of processed agricultural products by at least twice the current situation is one of the goals in this document

Soil enrichment

Policymakers in the division of tasks part in the National Document on Nutrition and Food Security (2012-2013), discussed the promotion of soil gardens in rural areas to increase people's access to micronutrients.

Theme 2: Indirect interventions

This theme refers to the indirect interventions associated with policies reducing the prevalence of VAD. Findings related to this theme are summarized under two subthemes: Health interventions and cultural.

Health interventions

Secure and control of micronutrients

National document for the development of multiple food and nutrition security is one of the few documents that directly refer to Vitamin A.

“The main problem in this area is the low average intake of Vitamins A and B2, calcium, and iron in urban and rural communities, and about one-fifth of pregnant women are deficient in Vitamin A.”

There is one of the strategic goals in Clause 5 in the food security document (1399). This goal is reducing the prevalence of common micronutrient deficiencies (iodine, iron, zinc, Vitamin D, Vitamin A) in children aged under 6 years by 20% of the base year. Its solution is to create a food and nutrition surrogate system and ensure cellular satiety and nutritional health in the community.

One of the food composition and health document's objective is a reduction in the prevalence of common micronutrient deficiencies (iodine, iron, Vitamin D, and Vitamin A) in the different aged groups' amount 5% from baseline to the end of the program.

PHC Network

National document for the development of multi-food security and nutrition points to the inefficiency of the PHC system in solving the nutritional problem, and it proposes to improve the organizational capacity of the PHC network to enhance the structure to strengthen the health and food security.

Breastfeeding

To maintain and promote the health of the mother and child, the national document for the development of multi-food security and nutrition supports the promotion of breastfeeding and proper complementary nutrition.

Clause 10 in the national document on nutrition and food security (2012-2013) points to promoting breastfeeding and breastfeeding support.

Cultural

Food culture

The national document for the development of multi-food security and nutrition mentioned The cultural issue of improper consumption and lack of attention to the Iranian table. Having some incorrect habits and behaviors can cause problems with food culture in the country, which on the one hand, has led to malnutrition and micronutrient deficiencies, and on the other hand, has led to a growing trend of chronic diseases. Furthermore, the lack of attention to the Iranian table as one of the standardized methods in improving the style of food consumption is one of the points mentioned in this document. Promoting food culture and literacy, the development of a culture of supply and

use of traditional and local food is one of the significant policies in this regard.

In the constitution of the national nutrition and food technology research institute of the country, planning and organizing research on nutrition science and food industries did not mention policies related to VAD also, in this document, there is no mention of soil enrichment.

Discussion

The aim of this study was to analyze the policies associated with VAD. Policymakers directly mentioned Vitamins A in the national document for the development of multi-food security and nutrition, national document on nutrition and food security (2012-2013), Research priorities of the deputy minister of health of the ministry of health, treatment and medical education 1394, food composition and health. However, there is no specific policy to reduce the prevalence of VAD in children aged 15 to 23 months. The most common system mentioned in these documents is training.

The policymaking process refers to how policies become agenda setting, created or defined, arranged, imparted, implemented, and evaluated.^[11] regarding the analysis of documents about VAD, there is no clear policy. To put it another way, the emphasis of policies is on the increasing food security, and less attention has been paid to micronutrients. Documents do not specify precisely how to reduce the prevalence of micronutrient deficiencies while reports in the country indicate that malnutrition, and deficiency of micronutrients, especially iron, calcium, zinc, Vitamin A, D, B2, is one of the nutritional problems in our country.^[5] Also, in documents, different aspects of policymaking have not been considered. For example, except for the national document on nutrition and food security (2012-2013), the evaluation of policies in another document is not mentioned. Policy monitoring and evaluation (M and E) had a critical role to play in effectively design, implement, and deliver public policies and services.^[12]

Evidence-based decision-making is centered on the justification of decisions. In the shift from an individual-clinical to a population-policy level, the decision-making context becomes more uncertain, variable, and complex.^[13] Not to mention there are various policies to prevent the increase in the prevalence of vitamin deficiency in the world^[7] With these in mind and the context diversity in Iran, it seems that these policies should be addressed by the context of society and pay more attention to local policies

The fortification challenge is to develop consumer demand fortified products among vulnerable groups and making this product available and affordable even to the poor, who usually are most in need and frequently live in rural areas or urban slums where the problem is often most significant.^[14]

policymakers must consider political, social, economic and technical issues, constructive participation, trust between government and private business in documents.^[14,15] Nonetheless, fortification should be exploited as a dietary intervention where appropriate, because after initial capital investments, it is a relatively inexpensive intervention to address public health problems.^[16] It seems that in the documents must be pointed fortification for what age group and with the cooperation of which organizations to reduce the prevalence of this vitamin.

According to the recommendations of the WHO, In settings where VAD is a public health problem, high-dose Vitamin A supplementation is recommended in infants and children 6–59 months of age.^[17] There has been no mention of megadose therapy, even in areas where the prevalence of vitamin deficiency is high in these documents. Although supplementation is the significant policy assistance in Iran, there are brief references to this policy.^[18]

The epidemiology of VAD associates the problem with diets predominantly consisting of vitamin A–inferior staples, such as cereals, grains, and tubers (e.g., rice, wheat, and cassava), and with little diversity; low and infrequent consumption of animal sources; and under consumption of green and yellow vegetables and fruits.^[19] This picture generally describes economically and socially deprived households that are least able to adapt to seasonal food availability and are often bound by cultural biases in child-feeding practices.^[14] Given the importance of diet in the implementation of this policy, it seems that all the factors affecting the increase of people's access to these resources and changing their behavior and food should be reviewed and their solutions mentioned in the documents. One of these critical factor is regional and intersectoral cooperation. For example, there is a strong correlation between the cost of Vitamin A source and consume them.^[20]

Both professionals training and people training are mentioned in the documents but are generally stated. There is no mention of how to use supplements for families. Furthermore, one of the positive points of these documents is supporting agricultural production and self-sufficiency, but the home garden is not mentioned.

In the health interventions, documents mostly refer to the promotion of breastfeeding; the rest of the interventions are not mentioned much.

Previous work has only focused on the epidemiology of VAD; we could not find any study on Vitamin A policies in Iran. Therefore, this study is the first step to analyze government documents related to Vitamin A reduction policies with a focus on the MOHME's programs. The findings might help to solve this public health problem in Iran. We did not analyze other organizational documents related to Vitamin A strategy in this study.

Conclusions

First, it seems that policymakers should revise documents, and make the decision about new policies with more emphasis on micronutrient. Researchers and civil society must determine the importance of reducing VAD for policymaking so that they mention the relevant policies clearly and transparently in the documents. Furthermore, researchers must review the factors affecting VAD based on a framework and report to policymakers. Local policies should be emphasized in documents. Accurately describe in detail how to implement and evaluate policy at different stages. In the end, given that the successful implementation of this policy requires inter-sectoral cooperation, it is better to define this cooperation accurately.

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Conflicts of interest

There are no conflicts of interest.

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