MOTIVATIONAL PROGRAM ON NUTRITION, HEALTH AND NUTRITIONAL SKILLS

Victor Guido Flores Ayala1, Dr. Juan Carlos Najera Gomez2, Mg. Mida Aguirre Cano3, Dra. Idelia Mirta Cristobal Lobaton4

1vflores@unheval.edu.pe
Universidad Nacional “Hermilio Valdizán” de Huánuco.
2najerag84@hotmail.com
Universidad Nacional “Hermilio Valdizán” de Huánuco.
3middaacano@unheval.edu.pe
Universidad Nacional “Hermilio Valdizán” de Huánuco.
4icristobal@unah.edu.pe
Universidad Nacional Autónoma de Huanta - UNAH

ABSTRACT

A bibliometric review is carried out on the scientific production related to motivational programs in nutrition, which are applied to parents of children with malnutrition problems. The data were collected by means of the Scopus database through a series of aspects taken into account, such as publications made during the decade between 2010 and 2020, without distinction of country of origin, which were related to motivational programs applied to develop nutritional skills. In this way, a total of 154 published documents that meet the search filters were identified. The analysis was carried out through a quantitative approach in order to know the main characteristics such as year of publication, country of origin, participating authors and type of publication. In this way, it was possible to know the details of the volume of publications at a global level, and to apply it to the local context through a qualitative analysis of specific cases through which it is possible to know the position of different authors regarding the proposed topic.

Key words: Motivational Programs, Health, Nutrition, Nutritional Skills.

I. INTRODUCTION

In 1996, the World Food Summit was held in Rome, attended by 186 countries, which pledged to eradicate hunger and reduce malnutrition by half the number of undernourished people by 2015.

Malnutrition occurs due to an imbalance between required and ingested nutrients. A nutrient deficit of short duration (acute or global malnutrition) only compromises the body's reserves, without important functional alterations. On the other hand, malnutrition of long duration (chronic malnutrition) can compromise vital functions. Values below 80% of the ideal are considered as limits to define malnutrition. 2 Standard Deviation (2 SD) of the average, or below the 5th percentile; values between -1 and -2 SD are considered as "risk" of constituting malnutrition.

The three anthropometric indices most commonly used in the measurement of nutritional status are: Weight for Height (W/L), Height for Age (T/A) and Weight for Age (W/A): First, Acute Malnutrition (W/A) consists of a decrease in body mass, initially at the expense of fat tissue, but can affect even muscle mass. Second, Chronic Malnutrition (C/U) consists of less linear growth, because it depends on the development of the long bones, and has fewer flexible dynamics than weight-for-height. And finally, Global Malnutrition (W/O) is the weight-for-age deficit.

Malnutrition affects both the body's immune and non-immune defenses, and as a result, it increases the incidence, severity and duration of common childhood diseases such as diarrhea, acute respiratory infections and measles (vaccine-preventable). In developing countries, approximately 55% of under-five mortality is associated with...
malnutrition and simply a modest increase in breastfeeding rates has the potential to prevent up to 10% of under-five deaths (Davidson, 2002). Therefore, it is of vital importance to know the current situation of the scientific research developed around the aforementioned topic, so a descriptive analysis of the same is carried out to help answer the question: How has the production and publication of research papers on motivational programs in nutrition and health been during the period 2010-2020?

II. GENERAL OBJECTIVE

To analyze from a bibliometric and bibliographic perspective, the production of high impact research papers on the variable motivational programs in nutrition, during the period 2010-2020.

III. METHODOLOGY

Quantitative analysis of the information provided by Scopus is performed under a bibliometric approach on the scientific production concerning the study of motivational programs in nutrition at a global level. Also, from a qualitative perspective, examples of some research papers published in the area of study mentioned above are analyzed from a bibliographic approach to describe the position of different authors on the proposed topic.

3.1 Methodological Design

<table>
<thead>
<tr>
<th>PHASE</th>
<th>DESCRIPTION</th>
<th>CLASSIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHASE 1</td>
<td>DATA COLLECTION</td>
<td>Published papers whose study variables are related to the study of Nutritional Motivation Programs. Research papers published during the period 2010-2020. Without distinction of type of publication. Without distinction of area of knowledge.</td>
</tr>
<tr>
<td>PHASE 2</td>
<td>CONSTRUCTION OF ANALYSIS MATERIAL</td>
<td>Year of publication Country of origin of publication Area of knowledge Type of publication</td>
</tr>
<tr>
<td></td>
<td>The information identified in the previous phase is organized. The classification will be made by means of graphs, figures and tables based on data provided by Scopus.</td>
<td>Year of publication Country of origin of publication Area of knowledge Type of publication</td>
</tr>
<tr>
<td>PHASE 3</td>
<td>DRAFTING OF CONCLUSIONS AND FINAL DOCUMENT</td>
<td>After the analysis carried out in the previous phase, we proceed to the drafting of the conclusions and the preparation of the final document.</td>
</tr>
</tbody>
</table>
Table 1. Methodological design.

Source: Own elaboration (2021)

IV. RESULTS

4.1 Co-occurrence of words

![Co-occurrence of words](image)

Figure 1. Co-occurrence of words

Source: Own elaboration (2021); based on data provided by Scopus.

Figure 2 shows the different topics in which the study of motivational programs in nutrition has been related, and it can be seen how the word Human coincides with most of the 154-research works identified through Phase 1 of the methodological design. From there, there are studies focused on Obesity, Eating Behavior, Body Mass, Overweight, among others. This allows inferring that the studies on nutritional issues include an important component regarding the health of human beings, evaluating their state through nutrition levels, relating this aspect with their physical characteristics.

There is also an important co-occurrence between words such as Lifestyle, Median Age, Risk Reduction, Nutritional Status, which suggest that studies also focus their efforts on trends among a certain group of people establishing behavioral patterns in terms of food, and how these patterns can influence the nutritional levels of individuals. It is of vital importance to know the status of current studies and to analyze which aspects are most frequently taken into account in these studies. In this way, the study analyzes which have been the key words within the publications, with the purpose of generalizing those concerning the nutritional status of people and the risks to which they are exposed thanks to a considerable level of malnutrition and how this even influences vital functions of the organism.

4.2 Classification of scientific production by year of publication
Figure 2. Distribution of scientific production by year of publication.

Source: Own elaboration (2021); based on data provided by Scopus.

The historical records on publications of research papers concerning motivational programs in nutrition show a considerable fluctuation as evidenced in Figure 2. Reaching its highest number in 2017 when a total of 20 publications were registered in Scopus, among which is the paper entitled "Reducing social inequalities in access to management of overweight and obesity care management for adolescents: the PRALIMAP-INÈS trial protocol and inclusion data analysis" (Legrand, et al., 2017). The purpose of this study is to evaluate the changes perceived in terms of food security through the reduction of the social gap and the eradication of extreme poverty through the creation of public policies that guarantee the fulfillment of this fundamental right, safeguarding the lives of the most needy and of those who are at high risk of malnutrition, such as children under three years of age whose economic conditions are precarious and who are exposed to a nutritional imbalance that in some cases leads to the atrophy of vital functions in their bodies and even death.

It should be noted that malnutrition does not always imply a reduction in height and weight of people, there are also proven cases of malnutrition in overweight and obese people, which worries health authorities because the intake of foods that lack nutritional properties has become increasingly common, especially in adolescents, so studies such as the one mentioned above are being prepared to analyze the conditions in which these patients develop their daily lives facing adverse situations caused by economic problems.

The second year with the second highest publication record is 2018 with 18 research papers within which the one entitled "Promoting practice in dietitians’ communication and nutrition counseling skills: a workplace education program" (Notaras, Mak, & Wilson, 2018) stands out, which aims to evaluate the effect of a workplace education program on the communication and nutritional counseling skills of dietitians. Although communication is the main tool to provide a correct counseling in nutritional motivation programs, they find that they fail in the training and updating processes of certain topics of interest to them. Therefore, it is proposed the creation of a program to develop communication skills for a correct nutritional counseling in the workplace.

4.3 Distribution of scientific production by country of origin
The United States is shown in Figure 3 as the country with the highest number of publications of research papers on motivational programs in nutrition and health, with a total of 77 records in Scopus, among which the paper entitled "Addressing adverse childhood experiences and health risk behaviors among low-income black primary care patients: testing the feasibility of a motivation-based strategy " (Goldstein, Topitzes, Birstler, & Brown, 2019) constitutes a pilot behavioral intervention plan in patients with certain specific characteristics, with the purpose of addressing adverse situations they have experienced throughout their lives. Risk behaviors such as post-traumatic stress disorder are also taken into account in this type of intervention, and it is very close to eating disorders which are also a very common cause of malnutrition. The intervention showed a positive result in the treatment of different affectations to the mental health of the patients, which can be a successful alternative in the complex study of malnutrition.

Australia and the United Kingdom are in second and third place with 18 and 15 publications, respectively, followed by Iran and Canada, each with 7 publications during the period 2010-2020. Spain is the only Spanish-speaking country in the ranking shown in Figure 3, occupying seventh place with 3 research papers published, among which the one entitled "Study protocol: Approach to overweight in Primary School. Role of motivational interviewing" (Gorrotxategi, et al., 2014) also proposes a behavioral intervention protocol for the treatment of overweight in children. Understanding overweight as the consequence of an eating disorder that leads to an increase in the fat mantle exposing patients to different associated pathologies, including malnutrition.

Within the classification of scientific production by country of origin, collaboration among them plays an important role since several authors from different institutions worldwide may be involved in the same research work, which is why the total number of documents identified in Phase 1 of the methodological design does not coincide with the total number of documents recorded in Figure 3, since each author involved in a single research work can be counted as a unit. And since there is international cooperation in the execution of the projects, the same paper counts as a production for the associated countries. Figure 4 shows how this interaction has taken place.

---

**Figure 3.** Distribution of scientific production by country of origin.

**Source:** Own elaboration (2021); based on data provided by Scopus.
The United States is ratified as the main exponent in the publication of research papers related to the topic proposed by this review, showing active participation in research with authors from Italy, Australia, United Kingdom, among others. A clear example of international cooperation in the generation of research papers is the paper entitled "Exploring the use of mobile health to improve the utilization of community-based nutrition and health services in the hills of Nepal: a qualitative study" (Acharya, et al., 2020), which features authors from the United States, Nepal and Thailand. The paper aims to evaluate the effectiveness of health brigades in remote populations of Nepal in terms of nutritional counseling and general health, thus seeking a significant reduction in the percentage of malnutrition in that country.

4.4 Distribution of scientific production by area of knowledge.

This section shows the classification of the total of 154 research papers identified in Phase 1 of the methodological design, distributed by the area of knowledge through which the methodologies for the development of each publication were executed. It should be noted that, as with the distribution of production by country, this classification also maintains the condition that the same paper can be counted for one, two or more areas of knowledge due to the multidisciplinarity that is experienced.
Medicine is the area of knowledge with the highest contribution in the total production of research papers, with 129 published documents, among which is the paper "Clinical outcome and cost-effectiveness of a 1-year nutritional intervention program in COPD patients with low muscle mass: the NUTRAIN randomized controlled trial" (van Beers, et al., 2020). whose objective is to investigate the clinical outcome of a nutritional intervention strategy in patients with a pulmonary condition whose level of success in their recovery has not yet been scientifically proven. The level of cost-effectiveness of such a program is also evaluated.

In second place, Nursing registers 43 documents during the period 2010-2020 and followed by Biochemistry and Molecular Genetics occupies the third place with 12. The Social Sciences are located in the fourth position with 10 published documents within which is the paper entitled "Development of intervention materials for the obesity prevention program in home styles for parents of preschool children" (Martin-Biggers, et al., 2015). which starts from the analysis of the home environment of children, as the main material for the study of the causes of childhood obesity. The strategy is based on family cooperation and change in eating habits that are raised for the benefit of the health of children who suffer from overweight at an early age, which could affect the healthy growth of their physical integrity and even bring mental problems that deteriorate their quality of life and full development in society.

4.5 Type of publication

Scientific researchers have different alternatives to publish their research works. In the scientific production of works related to nutrition and health motivation programs, the most used method was the publication through journal papers: 130 have been registered under this modality, 18 reviews, 3 conference articles and 1 book chapter.

Among the registered reviews, the work entitled "Nutrition and public health in medical education in the United Kingdom: Reflections and next steps" (Broad & Wallace, 2018) which reviews nutrition education in medical schools in the United Kingdom, with the aim of evaluating the effectiveness of the information provided by health professionals to patients with eating disorders. The proposal of an elective subject within the medical program that would address nutrition and health more deeply was analyzed, which is concluded to be of great help in strengthening the competencies of these professionals and thus give adequate management to any anomaly indicated by patients concerning weight loss or, on the contrary, excess weight.
V. CONCLUSIONS

The United States is the country with the highest production and publication of research papers on the study of motivational programs for nutrition and health during the period 2010-2020 in the world. This allows inferring those public policies aimed at the alleviation of poverty and hunger are mostly studied among the authors of that country. Likewise, it was possible to evidence a high interest in the study of the current situation of countries such as Nepal and Thailand and their remote populations that show high rates of malnutrition in early childhood, devising alternatives such as mobile health and nutrition counseling centers to reach territories far from cities where there is generally no coverage of such services.

From the texts analyzed in this research, it can be concluded that the programs designed to train in good nutrition practices for children, to avoid eating disorders that lead to malnutrition, are successful as long as there are two fundamental components, first, an intervention by professionals who share knowledge in a clear, concise and truthful way, ensuring that parents understand the importance of providing children with balanced nutrition. On the other hand, willingness on the part of the family and commitment so that everything shared through these programs is applied and there are changes in harmful behaviors. However, both aspects mentioned above would not be successful without the existence of public policies aimed at reducing food insecurity due to extreme poverty, so that the reduction of the social gap is essential if we want to ensure that children and adolescents do not have a decrease in their vital functions due to nutritional imbalance. It is suggested for the case of Peru, the implementation of public health policies in terms of training to communities far from cities, such as indigenous regions, where there are high levels of malnutrition due to lack of knowledge and lack of health care, campaigns or brigades that take such advice to the most remote places to provide care to these communities.

REFERENCES


