

A Research Proposal on the Importance of Food and Nutritional Information in Health Literacy

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Abstract: *Health Communication was defined in the 90's as any types of communication that affect the well-being of any individual through healthcare delivery and health promotion. The definition further elaborated as all health information and message transmitted to the public at large for creating health awareness, healthy skills and impact positive attitude to healthy lifestyle and quality of life. Effective health communication will shift social norms, ensuring social determinants health, optimal health outcomes and well-being on global scale. Health Literacy is later introduced as any biomedical evidence and mediator of health impacts involving health equity, healthcare efficiency and health motivation endorse on wellbeing and quality of life. Digital Health Literacy or e-health further defines as all dominance of mechanical and technology applications, platforms and system to create a transformation pathway of new knowledge and insights on healthcare settings and delivery to achieve health equity and mitigate health disparities (Taboada-Villamarin et al. 2024). The objective of this study is to depict and dwell into the importance of food and nutritional information in Health Literacy and the influence of health motivation on sociodemographic, socioeconomic, cultural and environmental within the whole healthcare ecosystem. Food and nutritional information are vital elements for holistic and wellbeing route to population across the globe. Dietary preference and nutritional perception align and comprehend fundamental public health policy. Health literacy levels determine effective health outcomes and health related decisions pressure by motivation such as economic, cultural, emotional and environment. The Qualitative methodology will be adopted to provide observation and overview of the challenges and impression on the importance of food and nutritional information in health literacy multidisciplinary aspects and framework of the healthcare panoramic structure. Food and nutritional literacy play a crucial role in the whole health ecosystem landscape. The findings here suggested that health literacy remains a universal challenge due to sociodemographic, socioeconomic, cultural and environmental differences on attitudes and understanding of nutritional values and food choices. In conclusion, this case study will unveil the significance on food and nutritional literacy in health communication and literacy especially during the panic moment of a pandemic outbreak like Covid-19 in 2020 and devastated situation to resolve health and disease management. Deficiency in health literacy will create challenges in wellbeing which contribute impact to global poverty, inequality and disparities in the healthcare system.*

Keywords: health communication, health literacy, food literacy, nutritional literacy, e-health

1. Introduction

The world is getting complex and global population has showed decline since the outbreak of Covid-19 pandemic (Lim et al., 2024). The term infodemic was widespread across many nations especially during the pandemic period that mislead, misinform and created population confusions. Amid in global emphasis in healthy food and health literacy, the level of individual dietary behavior has become even more critical and intricate to the policy-makers. Supplying adequate dietary model in health multifaceted disciplinary is the pathway to achieve sustainability healthcare literacy and public health goal. Health literacy can be explicated as literacy skill to read, write and understand words and text that extract out from health messages that require to make health related decision in a variety of different health management and illness resolution. World Health Organization (WHO) defined Health Literacy as “cognitive and social skill which determines the motivation and ability of individuals to gain access, understanding and use information in ways which promote and maintain good health. Health communication described as influential communication disbursement to control the pandemic as epidemiology, reducing waste in the healthcare delivery system and public health challenges. Sociodemographic and socioeconomic aspects can interact and attribute to confusion in adoptive useful nutritional information effectively. Productive health communication contributes to transparent distribution of health intervention and information among stakeholders to achieve health motivation and value creation which benefit of health and healthcare settings. Effective health communication and literacy is a pivotal in achieving sustainability healthcare development, healthcare delivery, health promotion, health equity and health related decisions.

Food and nutritional information are the two main key components in the health literacy associated with awareness and perception about food but they are not synonymous. The infodemic of food and nutritional literacy is part of the barriers and challenges in health communication. Food literacy attribute to the insight, ability and behavior on food choices and health outcomes where else nutritional concern on the motivation, accessibility, understanding on food intake impact and wellness management influencing the mortality and morbidity around the globe (Silva et al., 2024). Health literacy has been described as the skill to acquire, recognize and utilize information to adopt and decide that affect on health outcomes. There are three different levels of skills that introduced by Don Nutbeam (2018) as the functional, interactive and critical literacy. Functional health literacy explained the basic level skills for individual to obtain relevant health information concerning health risk, health resources and health management. Interactive health literacy wrests out more empirical skills to adapt health communication progression and emerging social phenomena.

Early life stages acceptance and adoption of healthy food and positive nutritional literacy are societal norms effectuality on the journey pursuing holistic and wellbeing. Irresponsible eating habits and inappropriate dietary patterns will gain negative health effects and greater tendency to risky health outcomes generate globally concern. The importance of food and nutritional literacy is inherent to promote healthy dietary habits and prevent noncommunicable disease like cancer, Type 2 diabetes, obesity and cardiovascular disease. Social augmentation in prevalence of good food will reduce the burden of such disease and improve overall health outcomes (Silva et al., 2023). Food choice is sway by the marketing pressure, intrinsic and extrinsic product characteristic, biological and physical elements, psychological means and sociodemographic features (Zwierczyk et al., 2022). Marketing pressure at the current era of time perceived as the crucial aspect of motivation on food choice and behaviors. The intrinsic factors of food and products relate to its appearance, taste, favour and smell. In turn, extrinsic

products' characteristics concern on the expectations, providers declaration, brand, packaging and perceived risk. Biological and physical elements are the demographic elements and digestion issues. Psychological and sociodemographic features such as memory, personal preference and empowering innovation. Nutritional literacy is the capability to acknowledge primary nutritional modalities which is essential for the list of abilities distinguished as food literacy.

Health motivation is influence by all the aspects of social, economic, cultural and emotional that determines health behaviors and preference in food choice. Apart from health motivation, health related knowledge and abilities also consider as important factors impacting social determinants health, patient centered communication and health behaviors across all levels of health settings. Elevate competencies and proficiencies regarding health cognition will boast resilience, prevent illness and manage future generations health issues. Food and nutritional interventions will increase health literacy and reduce global health disparities particular among disadvantages communities in many nations. Understanding food and nutritional literacy concepts will enhance the handling, selecting, purchasing and preparing meals and eating habits will be the gateway to healthy lifestyle and wellbeing.

The findings of this research are to exhibit the importance of food and health literacy on healthcare outcomes and disease prevention within facet of health literacy. Thus, this study was aimed to answer the following questions: -

- 1) To what extend health literacy bring impact to health communication?
- 2) How important is food and nutritional literacy within the health literacy landscape?
- 3) To what extent sociodemographic, socioeconomic, cultural and environmental factors bring impact to health motivation?

2. Literature Review

A healthy nation is based on healthy lifestyle and appropriate dietary paradigm. Policy makers around the world have implemented policies, programmes, and campaigns to improve and upgrade health literacy. The term health literacy was first used in 1974 to explained how health information impacts the educational system, the healthcare system and mass communication area (AMA, 2005). Historically, health literacy was described as literacy skills and abilities of the "system" or health care organization. In recent years, there is a shift towards the understanding between the interrelation of health literacy and skills of individual receiving care or treatment and the professional or system that are offering the care and treatment (Parnell et al, 2018). Social health literacy transformed over the years rely on the conditions, experience and alteration of the healthcare system. In 2003, the U.S Department of Education, National Center for Education Statistics completed the National Assessment of Adult Literacy (NAAL) with the intention to determine the status of English adult literacy in the United States and for the first time taken into consideration a specific section to measure health literacy. The health literacy section focused on the ability to read, understand and apply health-related information in English and focused on health tasks that were grouped into clinical, preventive and navigation of the health system categories. As reported in the NAAL, many adults have difficulty functioning in the healthcare system due to a lack of health literacy skills. According to the American Medical Association (AMA) report, Health Literacy and Patient Safety: Help Patients Understand, "poor health literacy is a stronger predictor of a person's health status than age, income, employment status, education level and race," Health Literacy continues to transform and introduced the importance in food and nutritional knowledge which contribute

impact on healthcare delivery and quality in life (Nutbeam, 2018, Parnell et al., 2018). Food and nutritional literacy are imperative concepts that attracted massive attention in recent years. As time goes by, there are many research and studies conducted on challenges to health literacy regarding food and nutritional knowledge or literacy. Food and nutritional literacy are two essential concepts that are homogeneous but not the same in actual concepts and perceptions. Food literacy consist of the skills to acquire food information, purchase food, food preparation and the nutrients of the food choices that attribute to the sustainability of food system while considering all sociodemographic, socioeconomic, cultural and environmental variables. Nutritional literacy is more on the acquisition, understanding, comprehension and evaluation of dietetic and nutrient benefit of food choices which influence decision making on health care management. Food and nutritional literacy are crucial features in health literacy which affects global health issues, planetary population figures and every level of disease prevention. Nutbeam (1998) defined health literacy as “The cognitive and social skills which determine the motivation and ability of individuals to gain access to, understand and use information in ways which promote and maintain good health.” Anderson (2022) stated that health literacy is a dynamic concept, as over a patient’s lifetime their health literacy can change, with degree of cognitive and physical health altering with age or disease stage. Silva (2023) claimed that health literacy is essential in promoting healthy lifestyles and behaviors that prevent chronic diseases as individual understand their condition and select the most relevant treatment solution. Health illiteracy is considering an obstacle that comprising serious health implications that contribute to health disparities and inequalities especially to disadvantages communities across the globe. Two vital aspects which navigate the right dimension of health literacy contribute the impact of food and nutritional knowledge and information because it affects individual decision making in adequate food choice and health outcome. At the current trend of processed and fast-food availability everywhere, health literacy will be an intervention choice of food option which alter an individual’s health and wellbeing.

Food and nutritional literacy are two very crucial which complementary each other but different concepts within the health literacy landscape that concern about the capabilities to appreciate and apply cognition on food choices. Helen Anna Vidgen and Danielle Gallegos published the paper about “Defining food literacy and its components” in 2014 and gained the most citation till today as it provides a comprehensive and widely accepted definition of food literacy and relevant significant on this area of study. Both authors described Food literacy as the scaffolding that empowers individuals, households, communities, or nations to protect diet quality through change and strengthen dietary resilience over time. Food literacy composed of a collection of inter-related knowledge, skills and behaviors required to plan, manage, select, prepare, and eat food to meet needs and determine intake. Nutritional literacy is the perception of different nutrients for staying healthy and the ability to read food labels in order to make healthy decision making. Both literacy and understanding must adopt together to achieve targeted health outcomes and holistic being. To aim sustainability food and health system, population must embrace all issues concerning social, economic, cultural, environmental and political features across a nation. The intervention of food and nutritional literacy will impact and give rise to promoting healthy eating and appropriate dietary patterns which will enhance the blueprint and application of health settings at the same time to bridge the gap on reducing health disparities and disease prevention especial among the low income and disadvantages demography. The effective interventions strategies including Health Education and Promotion, Health Literacy campaigns, Behavioral Interventions programs, Nutritional Intervention campaigns and Policy and Environmental changes to address the health array challenges, diet related health problems and improve the whole health ecosystem.

Malnutrition, micronutrient deficiencies, poor dietary practices and reproductive health especially on adolescent girls' health are some of the outcomes of health illiteracy that will increase morbidity and mortality across the globe.

Health behaviors are influenced by many aspects through sociodemographic, socioeconomic, cultural and environmental adoption and implementation affecting the dietary paradigm of a nation. To further bridge the gap of preventing disease disparities, inequalities and global health threat, by adopting key theories will be able to develop strategies to implement effective health interventions prompt to improvement and enhance health outcomes and status. Self-determination theory (SDT) has been recognized as one of the key theories in establishing strategies to influence behaviors through learning and growing and impact on motivation by supporting the outcome of the decision. SDT is a theory developed gradually for individual growth and change through motivation and psychological needs by two psychologists Edward Deci and Richard Ryan in their 1985 book "Self-Determination and Intrinsic Motivation in Human Behavior" (Cherry, 2022). They suggested SDT is a theory of motivation where human beings tend to be driven by the need to grow and gain fulfillment through self-determination. SDT consists of two major hypotheses elaborate individual motivation that trigger behavior change towards growth and autonomous factors impacting a different social phenomenon within the whole health ecosystem. The growth factor is more on the challenges to mastery on an action or skill. The autonomous factors are derived from the intrinsic motivation and the extrinsic motivation. Intrinsic motivation influences an action which purely resulting positive encouragement and feedback without any external or monetary rewards amounting satisfactory self-determination either on health outcomes or dietary patterns. Extrinsic motivation propels task due to external stimuli and obligations creating low self-determination and causing intrinsic motivation diminished involving social marketing pressure on food choices. These two types of motivation entities can be either proactive or passive due to the cohesion and influence of sociodemographic, socioeconomic, cultural and environmental variables impacting the healthcare system and outcomes.

The Self-Determination Motivation in Human Behavior Model explained how the interrelation components of autonomy, competence and connection/relatedness achieve positive health behaviors and psychological growth through intrinsic motivation on population in a nation (Zwierzczky et al., 2022). According to this model, individual will experience increase in life expectancy, enhanced mental health, improved holistic and wellbeing, and willingness to participate in treatment through behavior change and dietary patterns due to health motivation. By undertaking a task driven through interest (intrinsic motivation) which inherent satisfaction on personal goals (integrated regulations) will alter and change the behavior and motivate individual on decision making related to health issues. In long term, the whole health ecosystem and settings landscape will change. The intervention based on SDT will bring positive effect on health promotion and disease management with the sufficient of motivation occurrence. Lindbloom (2021) further confirmed individuals with high health-related motivation and higher levels of knowledge about food and nutrients' dietary functions creates more advantages nutritional positive behaviors than those with low health-related motivation but a high level of knowledge.

The model defined by Naughton (2018) is related to patient-centered approach to communication between a patient and the professional health provider a mutual acceptance of a problem, intentions and challenges of the treatment and therapy associated with sociodemographic variables. The clinicians must have a good rapport with the patient in order to achieve elicit patient reaction on therapy and wellness challenges which is essential for

determinant in health. The role of Patient-Centered Theory (PCC) will alleviate health competence and quality of care as it acknowledges the individual's feelings, concerns, problems, preferences, values and needs. Health communication is primitive for health prevention and promotion, doctor-patient-relationship development, public health awareness, and health risk communication in order to improve life quality at every level of community. The transformation within health environment, health settings, healthcare ecosystem, health communication, health literacy and all the social and environmental interventions created significant of influence on health equality through PCC as a mediator that give rise to health competency and efficiency. The novelty and development of PCC on the evolvement within the health communication and literacy landscape prioritize the importance of food and nutritional knowledge have acknowledged PCC as a theory of competency health communication which reduces communication gap, timeous appointments, health risk factors, health disparities, preventive disease and error in delivery system especially during a pandemic outbreak other than achieving health determinants especially among holistic minded communities that immerse in wellbeing dietary paradigm. The two adopted theories not only bridge the gap of health management, disease management and inequalities but also acting as substantial mediators link to construct health literacy to diverse population across the globe to modernize and refine the importance of health communication with impeccable health literacy.

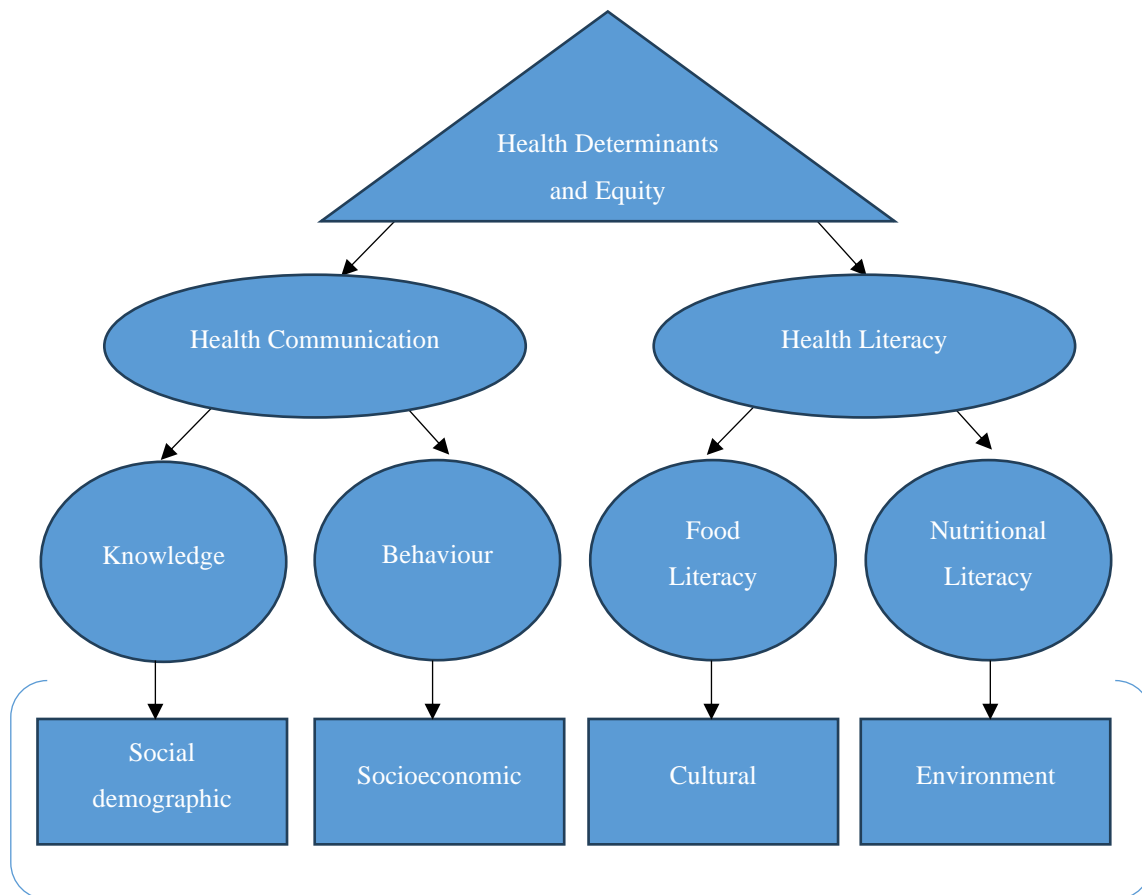


Figure 1: Theoretical Framework of Health Communication and Literacy.

3. Methods

This research employed the framework analysis method under qualitative methodology. This method is suitable to adopt on social reasons whereby a methodical approach to analyse and to identified the themes and variables. There are five stages of framework analysis structure

introduced in the 90's. The stages are familiarization, identify framework, indexing, charting, mapping and interpretation. Familiarization is the approach to identify the comprehensive area related to this research. This involved a detailed review on published articles and journals related to the topic. Identify framework engage the task to identify the main themes found in published literatures through qualitative coding. As for the coding process, each theme will be given a code. Indexing is to recognize the shared similarities in the code in order to be grouped together. Charting is the process of rearranging the collected data in a perceivable structure before developing the final coding framework. Mapping and interpretation exhibit the framework through a representational means for an elaborate study of the developed framework. This is an expressive step that explore themes and variables linking extensive narratives back to the data.

Familiarization

Familiarization process is the first step of the analysis which furnish the insight of this research. The researcher will be reviewing literatures through published articles and journals related to health communication, health literacy, food literacy and nutritional literacy in order to identify all the major themes. All of these will be contemplated before producing the themes in the next level.

Identify Framework

From the familiarization of data, the following steps will be identifying relevant themes. The themes will acquire from data that abstracted during the familiarization stage and was grouped and listed in a way that convenient the researcher to compile common attributes of data relevant to health outcomes. Generating these themes are essential before the indexing process take place.

Indexing

The process of indexing is to recognize all the similarities in the code in order to grouped them together. There are two crucial components were found at the end of the indexing process. The two components are identified as viewpoint (dependent variable) and impact (independent variable) will go through charting process where all 11 codes within the theme will be examined with the data abstracted from all the reviewed literature.

Charting

In this step, the researcher will make sure all the identified components are relevant to the objective of this research which to unveil the findings based on the importance of food literacy and nutritional literacy in health literacy directly bring impact to the health communication.

Mapping and Interpretation

The final step of framework analysis is mapping and interpretation where at this stage will be reviewing and combining data according to the relationship and attribution on the theme and codes allowing a comprehensive understanding of the interrelation of health behavior and social determinants of health. The researcher will then depict the connection of influence and contribution across all components and how the whole framework was structured. Upon the final stages of mapping, the establishment of viewpoint and impact were emerged as the final framework under this method of research. Viewpoint comprised the importance of food literacy and nutritional literacy in health literacy bringing impact to health communication landscape. Independent variable will explain how sociodemographic, socioeconomic, cultural and environmental aspects influence the whole healthcare ecosystem.

Table 1: Stages of Framework Analysis

Framework Analysis Stages	Details
Familiarization	For this research, the author gets familiarized with previous literature studies that define health communication, health literacy, food literacy and nutritional literacy.
Identifying Framework	From the qualitative review of the past definition, the main components of health communication are health literacy which food and nutritional literacy are the crucial elements contribute influence to the health outcomes.
Indexing	Food and nutritional literacy were discovered as viewpoint and dependent variables. External variables will be sociodemographic, socioeconomic, cultural and environmental factors.
Charting	From the theme internal variables, there were 11 original codes that were found. Upon perceiving these 11 codes towards its relevant perception on the importance of health literacy in health communication.
Mapping and Interpretation	The final framework model was created including the two vital categories: viewpoint and impact. The mapping of the framework will provide extensive explanation on how health literacy is crucial in health communication that influence by food literacy and nutritional literacy due to aspects from social demographic, socioeconomic, cultural and environmental.

4. Findings

The findings of this research were abstracted data from published literature on healthcare areas especially on health literacy through framework analysis of qualitative methodology. The intention is to unveil the impact of health literacy on health communication through the two main elements of food literacy and nutritional literacy. Measuring the importance of food literacy and nutritional knowledge are utmost importance to establish the crucial elements that bring effect to health literacy which contribute impact to the health communication landscape. The variables factors that influence the two elements' components of food literacy and nutritional literacy are sociodemographic, socioeconomic, cultural and environmental features create footprint to the whole health communication landscape.

Based on the framework analysis, the mapping on the framework were found from the established impact and variables are as follows: -

- 1) Food literacy attribute to the insight, ability and behavior on food choices and health outcomes where else nutritional concern on the motivation, accessibility, understanding on food intake impact and wellness management influencing the mortality and morbidity around the globe (Silva et al., 2024, Silva, 2023, Farmanova et al., 2018)
- 2) Food literacy consist of the skills to acquire food information, purchase food, food preparation and the nutrients of the food choices that attribute to the sustainability of food system while considering all sociodemographic, socioeconomic, cultural and environmental aspects (Lisciani et al., 2024, Nutbeam et al., 2018, Geboers et al., 2018, Anderson et al., 2022)

Table 2: Results of Frame Analysis

Categories/Themes	Codes	Framework Mapping
Impact	Actual use	x
	Knowledge	x
	Behaviour	/
	Budget	/
	Accessibility	x

Viewpoint	Usage	x
	Attitude	/
	Skill	x
	Awareness	/
	Preference	/
	Marketing pressure	/

In recent years there is a surge of interest among many researchers exploring on health inequalities and health literacy. Many literatures established the crucial connection between health literacy and health inequalities. Furthermore, scientific evidence recognized the intricate interaction among food skill, nutritional knowledge, health literacy, marketing pressure, digital divide and sustainable dietary patterns in sculpting food choices and health outcomes. Health inequity and disparities are evidently occurred across all life stages produced through the influence on sociodemographic, socioeconomic, cultural and environmental aspects. Food and health literacy play a vital role especially on the disadvantaged populations and marked communities that suffer deprivation, prejudice, social and physical isolation. Food and nutritional infodemic either through the conventional media channels or the digital technologies channels will attribute population challenges and critical health inequalities across the globe. These will give rise to confusion, misinterpretation, misconception on food and nutritional information amounting to detrimental dietary patterns and mislead health matters decision making.

5. Conclusion

Communication not only a legal and ethical entity but also a core element of enrichment healthcare quality and equity bringing solution to patient safety, ensures care collaboration, support patient-centered practices, optimal self-determinant implement and preventive of low health literacy. The two main components of health literacy are food literacy and nutritional literacy that bring impact to the understanding of food choices, nutritional knowledge and dietary patterns which enhance the health outcomes and overall wellbeing. Health literacy consisting of food and nutritional literacy played a pivotal role in outlining the perpetual diagram of health information resulting tangible influence on public health and awareness. It is imperative to adopt and implement food and nutritional campaign and programs to bridge the gap of misleading and infodemic on health literacy to the population across the nation in order to achieve sustainability health development and wellbeing status. This research therefore exhibits the importance of health literacy in health communication domain with the impact and variables which contribute to the health outcomes.

In conclusion, this research highlights the critical need for practical necessity to amplify the importance of food literacy and nutritional literacy. It emphasizes not only conducting future research and identifying effective interventions but bridging the gap between research and action. The findings here accentuate the importance of implementing health information programs, health campaigns, health publications, amending and implement health policies, and measuring health outcomes to ensure effective improvement in health promotion, dietary patterns and health management. By focusing on the pragmatic qualities on food choices and nutritional knowledge, the government and the law making must impose guidelines and protocols on food merchants and farmers to deliver the promised food label nutrients on their products which prevent food insecurity. Effective health communication on food literacy and nutrients information advance the intellectual of population on food choices and health recipes

in order to make decisions that result to optimistic dietary patterns, preventive disease and wellbeing status.

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