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IMPACT OF ECONOMIC FACTORS ON THE DIETARY PATTERNS OF THE POPULATION

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Abstract. Economic conditions are among the most important determinants of population nutrition, because food choice is shaped not only by medical knowledge or personal preference, but also by purchasing power, food prices, employment stability, market access, and social protection. The purpose of this article is to analyze how economic factors influence the dietary patterns of the population and to explain the mechanisms through which income, inflation, food affordability, and household budget constraints affect diet quality. The study was conducted as a narrative analytical review based on international reports, peer-reviewed scientific literature, and public health recommendations. The findings show that low income and high food prices usually lead households to reduce dietary diversity and replace nutrient-rich products such as meat, fish, dairy products, fruits, and vegetables with cheaper staple foods. This coping strategy may preserve daily energy intake in the short term, but it increases the risk of micronutrient deficiencies, excessive consumption of refined carbohydrates, and diet-related chronic diseases in the long term. Economic vulnerability affects children, pregnant women, elderly people, unemployed households, and rural families more severely, because their food budgets are more limited and more sensitive to price changes. The article concludes that improvement of population nutrition requires coordinated policies that combine income support, food price monitoring, subsidies for healthy foods, school nutrition programs, nutrition education, and regulation of unhealthy food environments. Economic development alone is not sufficient unless it is accompanied by measures that make healthy diets affordable, available, and socially acceptable for all groups of the population.

Keywords: economic factors, dietary patterns, food affordability, household income, food prices, nutrition, healthy diet, food security, public health

INTRODUCTION

Nutrition is a biological need, but the daily diet of a population is formed within a social and economic environment. A person may know that a balanced diet should include vegetables, fruits, whole grains, legumes, dairy products, eggs, fish, and moderate amounts of meat, yet this knowledge does not automatically become everyday practice. Food choice depends on whether these products are physically available, culturally acceptable, and financially affordable. For many households, especially those with low or unstable income, the food basket is determined by price before it is determined by nutritional value [1].

The relationship between economics and nutrition has become more visible in recent years because food systems have been affected by inflation, energy costs, climate-related disruptions, supply chain instability, and changes in household income. According to the State of Food Security and Nutrition in the World 2025, elevated food price inflation has weakened purchasing power in many countries and has made access to healthy diets more difficult, particularly among low-income populations (FAO, IFAD, UNICEF, WFP, & WHO, 2025). The World Bank Food Prices for Nutrition DataHub also reports that the average global cost of a healthy diet reached 4.46 purchasing power parity dollars per person per day in 2024, while about 2.6 billion people could not afford such a diet. These figures demonstrate that nutrition is not only a medical or behavioral issue, but also a question of economic access.

The World Health Organization emphasizes that dietary patterns are influenced by income,

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food prices, individual preferences, cultural traditions, geographical conditions, and environmental factors. Among these determinants, income and prices are especially important because they directly regulate household purchasing power. When the price of nutrient-rich food rises faster than household income, families often change the structure of their diet [1]. They may buy fewer animal-source foods, reduce fruit and vegetable consumption, choose cheaper refined grains, or increase reliance on processed products with high energy density and low micronutrient quality. Such changes may not immediately produce visible disease, but they gradually increase the risk of anemia, vitamin and mineral deficiencies, obesity, diabetes, cardiovascular disease, and reduced work capacity.

The economic dimension of nutrition is also important for public health planning. A country may have clinical guidelines for healthy eating, but these guidelines cannot be fully implemented if a large proportion of the population cannot afford the foods recommended in them. Therefore, the study of economic factors affecting dietary patterns is necessary for physicians, nutritionists, epidemiologists, economists, and policy makers. It helps explain why some groups consume inadequate diets despite general awareness campaigns and why malnutrition and obesity may coexist within the same society.

The purpose of this article is to analyze the influence of economic factors on the dietary patterns of the population, with special attention to income, food prices, inflation, employment, social inequality, and household coping strategies. The article also discusses the public health consequences of economically constrained diets and proposes policy directions for improving access to healthy nutrition.

MATERIALS AND METHODS

This article was prepared as a narrative analytical review. The methodological approach combined scientific literature analysis, interpretation of international public health reports, and comparative assessment of economic mechanisms influencing food choice. The review focused on publications and reports related to food affordability, household income, dietary diversity, food price inflation, and nutrition-related health outcomes.

The main sources included reports of the Food and Agriculture Organization of the United Nations, the World Health Organization, the World Bank Food Prices for Nutrition initiative, and peer-reviewed studies on the cost of healthy diets, food prices, nutrition transition, and dietary quality. Particular attention was paid to studies that explain how households respond to food price increases and income limitations. The analysis included both global evidence and findings relevant to low- and middle-income countries, where food expenditure usually takes a larger share of household budgets.

The conceptual framework of the article was based on the idea that economic factors affect nutrition through several connected pathways. The first pathway is income, which determines the total amount of money available for food after other necessary expenses. The second pathway is food prices, which determine the relative affordability of different food groups [2]. The third pathway is employment and economic security, which influence the stability of household consumption. The fourth pathway is social protection, which can reduce the negative nutritional impact of poverty, unemployment, illness, or seasonal income changes. The fifth pathway is the food environment, where market availability, retail structure, advertising, and convenience shape the practical choices of consumers [3].

No primary human participants were involved in this review, and no individual medical data were used. Therefore, formal ethical approval was not required. The analysis was conducted with the aim of developing a scientifically grounded and practically useful interpretation of the relationship between economic conditions and population nutrition.

RESULTS

The analysis showed that household income is one of the strongest determinants of dietary quality. Families with stable and sufficient income are more likely to purchase diverse foods, including fresh fruits, vegetables, dairy products, lean meats, fish, eggs, legumes, and nuts.

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These foods provide essential proteins, vitamins, minerals, essential fatty acids, and dietary fiber. In contrast, households with limited income often prioritize satiety and price. Their food choices tend to shift toward bread, rice, potatoes, pasta, refined flour products, sugar, and cheap fats. Such foods may provide enough calories, but they do not always provide sufficient micronutrients or balanced macronutrient composition.

This pattern is consistent with the concept of diet affordability. A healthy diet is not simply a list of recommended foods; it is a diet that must be economically achievable in real markets. The World Bank Food Prices for Nutrition methodology defines the cost of a healthy diet as the least expensive combination of locally available foods that can meet food-based dietary guidelines. This approach is important because it measures not an ideal theoretical diet, but the minimum cost of meeting dietary standards in a given food environment. If even the least expensive healthy diet is beyond the reach of a household, then nutrition education alone cannot solve the problem.

Food prices influence diet not only through their absolute level, but also through relative prices between food groups. Research by Headey and Alderman showed that the relative caloric prices of healthy and unhealthy foods differ systematically across countries and are associated with dietary indicators and nutrition outcomes (Headey & Alderman, 2019). In many settings, energy-dense products are cheaper per calorie than nutrient-dense foods. This price structure creates an economic incentive to consume cheaper calories rather than better-quality food. As a result, low-income households may become trapped in a diet that is sufficient in energy but poor in micronutrients.

Inflation intensifies this problem. When food prices rise faster than wages, pensions, scholarships, or social benefits, the real purchasing power of households declines. Families respond by reducing food quantity, lowering food quality, or changing the composition of their diet. In the early stage, they may reduce more expensive foods such as meat, fish, dairy products, fruits, and nuts. Later, they may reduce meal frequency, portion size, or the diversity of the weekly menu. In vulnerable households, these changes affect children and women first, because adult members may redistribute food within the family or prioritize working members who need energy for labor.

The results also indicate that employment stability plays an important role in dietary patterns. A household with regular income can plan food purchases, store products, and maintain dietary diversity. In contrast, irregular income leads to irregular consumption. Seasonal workers, informal workers, migrants' families, and households dependent on daily earnings may experience periods of relative food adequacy followed by periods of food restriction. During economically difficult periods, families often choose foods that are cheap, filling, and easy to store. This may explain why cereals, potatoes, oil, sugar, and tea remain central in the diets of many economically vulnerable families.

Economic pressure also changes consumer behavior in urban and rural settings differently. Urban households are more dependent on purchased food and are therefore highly sensitive to market prices. When prices rise, urban families have fewer opportunities to compensate through household production. Rural households may have access to gardens, livestock, or seasonal agricultural products, but they may also face low cash income, limited market access, and seasonal food insecurity. Therefore, rural residence does not automatically protect families from poor diet quality. The decisive factor is whether household production is diverse enough and whether income is sufficient to purchase foods not produced at home.

The review further showed that economic inequality produces differences in nutrition within the same population. Higher-income groups may diversify their diets and consume more animal-source foods, fresh produce, and specialized health products. Middle-income groups may maintain acceptable diet quality but become sensitive to inflation. Low-income groups may rely heavily on staple foods and cheaper processed products. This creates a nutritional gradient, where diet quality improves as income rises. However, high income does not always guarantee

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healthy eating, because it may also increase access to fast food, sweetened beverages, and ultra-processed products. Thus, economic growth may reduce undernutrition while simultaneously increasing the risk of obesity and non-communicable diseases if food environments are not regulated.

Another important finding is that household coping strategies can have hidden long-term consequences. Reducing fruit and vegetable intake may not immediately cause illness, but over time it decreases the intake of vitamin C, folate, potassium, antioxidants, and dietary fiber. Reducing meat, eggs, dairy, and fish may lower intake of high-quality protein, iron, zinc, calcium, vitamin B12, and omega-3 fatty acids. Increasing cheap refined carbohydrates may raise glycemic load and contribute to overweight, insulin resistance, and dyslipidemia. Therefore, economically driven dietary simplification is a public health risk even when daily calorie intake appears adequate.

The results also suggest that social protection and public food programs can moderate the effect of economic stress on nutrition. Cash transfers, targeted food support, school meals, maternal and child nutrition programs, and subsidies for healthy foods may help households maintain dietary diversity during inflation or income loss. However, the effectiveness of these measures depends on targeting accuracy, benefit size, market availability, and nutrition sensitivity. If social support is too small or if healthy foods are unavailable in local markets, the impact on diet quality may be limited.

DISCUSSION

The findings confirm that the diet of a population is formed at the intersection of health knowledge and economic possibility. Public health recommendations usually emphasize what people should eat, but economic analysis explains what people can realistically buy. This distinction is crucial. A physician may advise a patient to consume more fish, dairy products, vegetables, and fruit, but for a low-income family such advice may remain impractical if these foods are expensive or unstable in supply. Therefore, effective nutrition policy must combine education with affordability.

The influence of income on diet quality is not linear in all situations. At very low income levels, additional income usually improves food security because households can buy more food and diversify their diet. At moderate income levels, additional income may improve quality further by increasing consumption of animal-source foods, fruits, and vegetables. At higher income levels, however, income may also increase consumption of restaurant meals, sugary drinks, confectionery, processed meat, and convenience foods. This means that economic development should be accompanied by nutrition education, food labeling, taxation of harmful products when appropriate, and improvement of healthy food environments.

Food price inflation is especially dangerous because it affects almost all households but harms the poor most severely. Low-income families spend a larger share of their income on food, leaving less flexibility for adaptation. When prices increase, they cannot easily compensate by reducing luxury expenses because their budget is already concentrated on necessities. This is why inflation may deepen nutritional inequality even when average national income continues to grow. A small price increase in meat, milk, eggs, fruit, or vegetables may be enough to push these foods out of the regular diet of poor households.

The affordability of healthy diets is also linked to agricultural and trade policy. If national food systems mainly support production of staple grains but do not sufficiently support fruits, vegetables, legumes, dairy, poultry, and fish, the market price of nutrient-rich foods may remain high. In such conditions, households are not choosing unhealthy diets simply because of habit; they are responding rationally to the prices they face. This supports the view that nutrition policy should not be limited to the health sector. Agriculture, trade, education, taxation, social welfare, and urban planning all influence the population's food choices.

The double burden of malnutrition is one of the most important consequences of economically shaped diets. In the same population, and sometimes in the same household,

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undernutrition and obesity may coexist. A child may have micronutrient deficiency because the diet lacks animal-source foods and vegetables, while an adult may be overweight because the diet is rich in refined carbohydrates, oils, and cheap processed products. This paradox is not contradictory. It reflects the fact that poor diet quality can produce both deficiency and excess, depending on age, physiology, activity level, and metabolic vulnerability.

The role of ultra-processed foods deserves special attention. These products are often cheap, convenient, aggressively marketed, and highly palatable. In urban settings, they may become attractive to low- and middle-income consumers because they save time and provide immediate satiety. However, frequent consumption of ultra-processed foods is associated with high intake of added sugars, salt, unhealthy fats, and low intake of fiber and micronutrients. Popkin and colleagues described the modern nutrition transition as a shift toward highly processed dietary patterns that contribute to obesity and chronic disease (Popkin, Corvalan, & Grummer-Strawn, 2020). Economic factors accelerate this transition when healthier alternatives are more expensive or less convenient.

For medical professionals, these findings have practical value. When assessing a patient's diet, it is not enough to ask what the patient eats. It is also important to understand why the patient eats that way. Questions about household income stability, food prices, family size, employment, market access, and cooking conditions may reveal barriers that cannot be solved by advice alone. A patient with diabetes, hypertension, anemia, or chronic liver disease may need dietary correction, but recommendations should be adapted to affordable local foods. Otherwise, the patient may perceive medical advice as unrealistic and may not follow it.

In the context of low- and middle-income countries, including Central Asian settings, the economic determinants of nutrition are particularly relevant. Rapid urbanization, changing labor markets, migration, food price fluctuations, and the expansion of processed food retail may all influence household diets. Traditional diets may contain valuable elements such as legumes, fermented dairy products, vegetables, soups, and home-cooked meals, but economic pressure can reduce diversity and increase dependence on bread, refined grains, potatoes, sweet tea, and cheap fats. Public health strategies should therefore protect the positive elements of traditional food culture while improving access to nutrient-rich foods.

Policy responses should be comprehensive. First, governments should regularly monitor the cost of a healthy diet, not only the cost of calories. Second, social protection programs should be adjusted for food price inflation, because fixed benefits lose nutritional value when prices rise. Third, subsidies and agricultural incentives should support the production and distribution of vegetables, fruits, legumes, eggs, milk, and other nutrient-rich foods. Fourth, school meals and maternal-child nutrition programs should be strengthened, because children and pregnant women are highly sensitive to poor diet quality. Fifth, nutrition education should focus on affordable healthy choices using local foods rather than expensive imported products.

It is also necessary to improve the food environment. Healthy foods should be available in schools, workplaces, hospitals, public institutions, and local markets. At the same time, excessive marketing of foods high in sugar, salt, and unhealthy fats should be restricted, especially when directed at children. The WHO recommends policy measures such as incentives for fresh fruit and vegetable production and retail, reformulation of processed foods, protection of children from harmful food marketing, and standards for healthy foods in public institutions. These measures show that improving diet quality requires both economic and regulatory tools.

The limitations of this review should be acknowledged. The article is based on secondary sources and does not present primary household survey data. Therefore, it cannot measure the exact strength of association between income and diet in a specific country or region. In addition, dietary patterns are influenced by culture, religion, education, gender roles, time availability, health status, and personal preferences. Economic factors are powerful, but they do not act alone. Future research should include household-level surveys, food expenditure analysis, dietary recall, anthropometric indicators, and biochemical markers to better understand how economic

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conditions translate into nutritional outcomes.

Despite these limitations, the evidence clearly indicates that economic factors are central to population nutrition. The affordability of healthy diets should be treated as an essential public health indicator. If healthy food is not economically accessible, then the burden of nutrition-related disease will continue to increase, and health systems will face rising costs from anemia, childhood growth disorders, obesity, diabetes, cardiovascular disease, gastrointestinal disorders, and other diet-related conditions.

CONCLUSION

Economic factors have a direct and profound impact on the dietary patterns of the population. Income level, food prices, inflation, employment stability, household size, market access, and social protection determine whether families can maintain a diverse and healthy diet. When economic pressure increases, households often simplify their diet, reduce consumption of nutrient-rich foods, and rely more heavily on cheaper staple or processed products. This strategy may temporarily protect against hunger, but it weakens diet quality and increases long-term health risks.

The most vulnerable groups are children, pregnant women, elderly people, unemployed households, low-income families, and populations living in areas with limited access to diverse foods. For these groups, healthy eating is not only a matter of knowledge, but also a matter of affordability. Therefore, public health policy should move beyond individual advice and address the economic conditions that shape food choice.

A scientifically grounded nutrition strategy should combine income support, food price monitoring, social protection, healthy food subsidies, school and maternal nutrition programs, regulation of unhealthy food marketing, and practical nutrition education based on affordable local foods. Economic development becomes truly beneficial for population health only when it improves access to healthy, diverse, safe, and culturally acceptable diets for all social groups.

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