

Health Communication and Nutrition Disorders

Sağlık İletişimi ve Beslenme Bozuklukları

Esengül Akkök^{1,*} , Zeynep Dila Tekin² , Melis Ayse Ozdemir³ , Ezgi Yıldız⁴ ,

Banu İlgi Alibeyoğlu¹ , Hatice Altunkaya⁵ , Ali Erdoğan¹ , Hatice Bilgili¹ 

¹Biomedical Engineering, Inonu University, Malatya, Türkiye

²Bahcesehir Hevsel Science and Technology High School, Diyarbakır, Türkiye

³BASIS Independent Mclean High School, Virginia, ABD

⁴Psychology, Munzur University, Tunceli, Türkiye

⁵Faculty of Medicine, Inonu University, Malatya, Türkiye

* Corresponding author: esengulakkok@gmail.com

Geliş Tarihi / Received: 25.10.2022
Kabul Tarihi / Accepted: 2.12.2022

Derleme Makalesi/Review Article
DOI: 10.5281/zenodo.7474585

ABSTRACT

As with human behavior, nutritional behavior is a complex phenomenon influenced by a wide variety of factors. The most important of these factors is that nutritional habits are exposed to especially the negative effects health communication and new media in many aspects. Today, when communication and information opportunities are at a high level, people's access to various information about foods, healthy nutrition and food group; their ability to interpret, understand, criticize and make healthy food choices in line with this information is effective on their nutritional habits. As a result, in addition to the existing health problems, people are faced with many new health conditions arising from eating disorders such as Anorexia Nervosa, Bulimia Nervosa, Orthorexia Nervosa, and Obesity. It is known that obesity poses a risk for various diseases such as cardiovascular diseases, diabetes mellitus, hypertension, dyslipidemia, metabolic syndrome, some hormone-dependent cancers and obstructive sleep apnea syndrome, which are generally one of the most common of these health problems. The spread of fast-food culture also causes an increase in unhealthy nutrition and especially obesity. Therefore, the consequences of the effects of social orientations on nutrition can be pathological from time to time.

This review aimed to provide information about the effects of health communication on nutritional disorders and some diseases resulting from these effects.

Keywords: Healthcare, Healthcare Communication, Nutrition Awareness, Eating Disorders, Nervosa

ÖZET

İnsan davranışlarında olduğu gibi beslenme davranışı da çok çeşitli faktörlerden etkilenen karmaşık bir olgudur. Bu faktörlerden en önemlisi beslenme alışkanlıklarının birçok açıdan, özellikle sağlık iletişiminin ve yeni medyanın olumsuz etkilerine maruz kalmasıdır. İletişim ve enformasyon imkanlarının üst düzeyde olduğu günümüzde kişilerin besinler, sağlıklı beslenme ve besin grupları ile ilgili çeşitli bilgilere, ulaşabilmeleri, bu bilgileri yorumlayabilmeleri, anlayabilmeleri, eleştirmeleri ve bu bilgiler doğrultusunda sağlıklı besin seçimleri yapmaları beslenme alışkanlıkları üzerinde etkilidir. Bunun sonucunda özellikle son dönemlerde insanlar mevcut sağlık problemlerine ek olarak, Anoreksiya Nervosa, Bulimiya Nervosa, Ortoreksiya Nervosa, Obezite gibi yeme bozukluklarından kaynaklanan yeni birçok sağlık sorunuyla da karşılaşmaktadır. Genellikle bu sağlık sorunlarının en yaygınlarından biri olan obezite, kardiyovasküler hastalıklar, diabetes mellitus, hipertansiyon,

dislipidemi, metabolik sendrom, hormon bağımlı bazı kanserler ve obstrüktif uyku apnesi sendromu gibi çeşitli hastalıklar için risk oluşturduğu bilinmektedir. Fast-food kültürünün yaygınlaşması da sağlıksız beslenme ve özellikle obezitenin giderek artmasına neden olmaktadır. Dolayısıyla toplumsal yönelimlerin beslenme üzerindeki etkilerinin sonuçları zaman zaman patolojik olabilmektedir.

Bu derleme, sağlık iletişiminin beslenme bozuklukları üzerine etkileri ve bu etkilerden kaynaklanan bazı hastalıklar hakkında bilgi vermeyi amaçlamıştır.

Anahtar Kelimeler: Sağlık, Sağlık İletişimi, Beslenme Farkındalığı, Yeme Bozuklukları, Nervoza

1. HEALTH COMMUNICATION

Today, people face many new health problems in addition to their existing health problems. Especially the change in living conditions and eating habits, technological development and its individual/societal effects make the medical world insufficient to fight them alone and increase the need for interdisciplinary formations (Yılmaz & Şireci, 2020). As a result, in parallel with scientific developments, the field between health sciences and social sciences has become more permeable in the last 50 years (Göksu, n.d.), and the discipline of health communication has emerged in which health scientists and social scientists interact more with each other (Yılmaz & Şireci, 2020).

The discipline of health communication aims to create communicative awareness in the face of possible health problems that may arise in the social arena by improving existing health services both in terms of individual and public health (social) (Arslan, 2021). Although health communication has been understood for many years primarily as the interpersonal relations experienced during the realization of the service or as informing the media workers (Göksu, n.d.), today, health communication is defined as a health-centered communication in which people or groups involved in health act for their purposes (Göksu, n.d.; Gündüz Hoşgör, 2014). Citizens in need of health are able to share all kinds of health-related information they need with these relevant persons and institutions, regardless of their level of health needs, both through public health policy and through health professionals. Hence the health communication is a type of communication which positively affects their awareness and knowledge levels about their own health, without being prevented from information asymmetry. Health communication is not only useful to people who need accurate health information, but it also provides public benefit from a broad perspective in terms of fulfilling a societal mission. It is possible to say that, thanks to the existence of preventive and preventive treatments and people who are aware of them, it has an undeniable benefit to the country's economy, as diseases can be controlled before they occur or progress further (Gündüz Hoşgör, 2014).

Health communication also has functions such as increasing the target audience's level of knowledge and awareness of problems and solutions to a health issue, influencing perceptions, beliefs and attitudes that change social norms, prompting action, demonstrating and exemplifying health skills, reinforcing knowledge, attitudes or behaviors. It also has benefits such as demonstrating the benefits of behavior change, providing insight into a health issue or policy, increasing demand and support for health services, debunking myths and misconceptions, and strengthening organizational relationships (Şengün, 2016).

2. NUTRITION

Nutrition is the use of nutrients for growth, maintenance of life and protection of health. It examines the types, quantities, properties and functions of nutrients that are essential in nutrition, the composition, physical and chemical properties of nutrients, the effects of the processes applied from

production to consumption on food quality, and the making of appropriate nutrition plans for individuals and groups with different age, gender, work and special conditions. In short, nutrition is a science that examines the human-nutrient relationship in all phases from the production of nutrients to their utilization in the cell (Sanrı, 2014; Yıldırım & Karıcı, 2015).

Today, adequate and balanced nutritional status in both patients and healthy individuals is very important. Dietitians develop nutrition programs suitable for the needs of patients in clinics and ensure their implementation and reporting (Kutluay Merdol, 2016). In nutritional support, first of all, the amount of calories that the individual should take daily should be calculated. The individualized nutrition plan should focus on personal preferences, needs, and goals rather than recommending specific dietary patterns (İdiz, 2019). The most commonly used method for this is the Harris-Benedict formulation. This formulation is based on basal metabolic rate, basal metabolic rate; It is the amount of energy required for the continuation of vital functions when the body is at rest (Yıldırım & Karıcı, 2015).

2.1. General Effects of Nutrition on Health

Nutrition plays a fundamental role in sustaining a healthy life (Yıldırım & Karıcı, 2015), providing the energy needed to maintain life-supporting functions such as breathing and organs such as the heart, brain and liver. The data obtained from the studies indicate that our eating habits are not healthy and some corrections are needed. Existing data show that the health status of the population is at risk when combined with anthropometric measurements. These data, based on body mass index, show that more than 50% of individuals are overweight and approximately half have high blood pressure (Akyol et al., 2008).

A healthy diet is a form of nutrition aimed at protecting and improving health and reducing the risk of chronic diseases. Various countries have developed nutritional guidelines for this purpose. Although there are few differences between these guidelines, the common feature of all of them is to give importance to diversity in nutrition and balance between basic food groups, and to increase the consumption of vegetables, fruits and pulp by reducing the amount of fat (Baysal, 1998). These healthy eating guidelines, together with regular exercise and the prevention of smoking, play an important role in the development and prevention of cardiovascular diseases that cause worldwide mortality (Tayhan Kartal & Demir Doğan, 2019).

2.2 Food Literacy and Health

It is thought that there is a relationship between health and food literacy in the fields of nutrition and health science, and that individuals have a personal relationship with food depending on environmental, cultural, political and economic factors (Bor & Saka, 2021). The focus is on food literacy and health literacy skills, and the knowledge and capacities in the food environment are investigated (Velardo, 2015). Food literacy is also an important factor in preventing the deterioration of health status of individuals with poor food choices (Bor & Saka, 2021). The main objectives of food and nutrition literacy (Aktaş & Özdoğan, 2016) are given below.

- Increasing the level of food and nutrition literacy
- Creating and maintaining motivation for healthy eating
- To be able to access and effectively use food and nutrition information
- Helping healthy food selection and consumption
- To be able to engage in the right behaviors in order to maintain a healthy diet.
- Having skills related to the preparation, cooking and storage of food and beverages

- To be able to accurately determine the energy and nutrient requirements
- To raise awareness about food and nutrition problems
- Evaluate the functioning of the food and nutrition system
- To raise awareness of traditional, cultural and ecological dimensions of nutrition.
- Being able to critically evaluate the messages in the media
- To be able to use information such as energy value and nutritional content on food labels
- Increasing and disseminating the quality of nutrition education
- Being able to interpret written and visual messages in food and nutrition guides
- To be able to examine publications with a critical and theoretical perspective.

2.3. Eating Awareness

Eating awareness is defined as 'eating by focusing on the food to be consumed here and now by realizing how and why eating behavior occurs rather than what is eaten, internalizing the concept of physical hunger-fullness and being aware of the effect of emotions and thoughts, not being affected by environmental factors, and not judging food choices' (Köse et al., 2016). By increasing attention to eating behavior and reducing sensitivity to thoughts and emotions during food consumption, healthier food choices can be made.

Awareness encompasses being fully present at all times by creating a state of complete consciousness of one's own emotional and physical state and environment (Ludwig & Kabat-Zinn, 2008), and is becoming increasingly important in the treatment of eating disorders. Being consciously aware of habitual eating behaviors enables the individual to better control their emotional reactions and to have the ability to adapt when necessary (Çolak & Aktaç, 2019).

Awareness-based interventions are intensive skill-based programs aimed at improving mindfulness practice (Clementi et al., 2017; Khan & Zadeh, 2014) by reducing negativity and increasing well-being in the management of depression, stress, physical function, quality of life, and chronic pain (Kabat-zinn, n.d.). These interventions are increasingly being incorporated into treatments designed to manage eating behaviors in many conditions, such as reducing food cravings, inhibiting emotional eating, stopping overeating, and portion control (Olson & Emery, 2015). This is because research has found that eating mindfulness is negatively associated with eating behaviors that occur in binge eating and emotional eating disorder and lead to obesity (Levin et al., 2014). Eating awareness is frequently used in the treatment of anorexia, bulimia and other eating disorders, as it aims to teach nutrition according to cellular hunger rather than sensory (hedonic) and emotional hunger by enabling the person to recognize the types of hunger (Çolak & Aktaç, 2019). At the same time, many large-scale meta-analysis studies have shown that mindfulness positively affects weight control and healthy eating (Bor & Saka, 2021).

3. PROBLEMS CAUSED BY INSUFFICIENT AND UNBALANCED NUTRITION

Inadequate and unbalanced nutrition is one of the important factors that cause an increase in health problems in developed and developing countries (Pekcan, 1983; Sanrı, 2014). Hunger, poverty and malnutrition (malnutrition-obesity), which are among the biggest global problems of today, affect all countries, although in different dimensions. The World Health Organization (WHO) accepts that the

process of malnutrition begins before the birth of the baby and continues until death in the life cycle (Aslan, 2001). In addition, the World Health Organization (WHO), defines malnutrition as a state of cellular imbalance between energy and nutrients, which are the body's needs for growth, survival, and specific functions (Sanrı, 2014). Adequate and balanced nutrition is the basic element in the healthy and strong life, economic and social development and welfare of the society and individuals (Sanrı, 2014).

Obesity, which is generally expressed as equivalent to an unbalanced diet, is defined by the WHO as “the increase in adipose tissue to such an extent that it leads to negative health consequences” (WHO, 2022). Obesity combined with inadequate, or malnutrition is known to pose a risk for a variety of diseases, including cardiovascular disease, diabetes mellitus, hypertension, dyslipidemia, metabolic syndrome, obstructive sleep apnea syndrome, osteoporosis, constipation, diverticular disease, iron deficiency anemia, oral mucosal diseases, malnutrition and the development of certain hormone-dependent cancers. In addition, the amount of uric acid in the blood of obese individuals increases and accordingly, a predisposition to gout occurs. Weight changes and frequent weight gain and loss in obese individuals are also one of the most important factors in gallstone formation (Doak et al., 2006; Pekcan, 1983; Sanrı, 2014).

3.1. Some Nutritional Diseases

3.1.1. Obesity

Obesity, which causes an increase in adipose tissue and dysfunction in the body, is known to be associated with an increased risk of chronic diseases such as hypertension, type 2 diabetes and cardiovascular disease (Çolak & Aktaç, 2019; Tayhan Kartal & Demir Doğan, 2019). In particular, an increase in visceral adipose tissue surrounding the organs is an important risk factor for cardiovascular morbidity and mortality (Tayhan Kartal & Demir Doğan, 2019). This association between adiposity and cardiovascular diseases can be explained by the increased risk of dyslipidemia, which includes high BMI (body mass index), high triglyceride and LDL-cholesterol levels and low HDL-cholesterol levels. Chronic inflammation with dyslipidemia contributes to endothelial dysfunction and macrovascular changes, leading to the development of cardiovascular diseases (Jiang et al., 2013).

Obesity, a pandemic of the modern world, is a disease that can lead to physiological, organic, systemic, hormonal, metabolic, aesthetic, and psychological problems (Süzen, 2010). Today, obesity is a global disease that not only causes many diseases but also reduces the quality and duration of life (Doak et al., 2006). In the clinical diagnosis of obesity, the BMI measurement shown in Table 1 is frequently used (Pekcan, 2012; Sanrı, 2014). Although overweight, which is one of the values shown in the table, does not carry a significant risk in the formation of various diseases, severe obesity increases morbidity and mortality (Nişancı et al., n.d.).

Table.1 BMI Classification (Pekcan, 2012)

BMI Values (kg/m ²)	Classification
<16.0	Severe Weakness
≥16.0 - <17.0	Moderate Weakness
≥17.0 - <18.5	Mild Weakness
≥18.5 - <24.9	Normal

≥ 25.0 - < 29.9	Fat
≥ 30.0 - < 39.9	Fat
≥ 40.0	Heavily Obese

3.1.2. Dyslipidemia

Dyslipidemia caused by an eating disorder is defined as the presence of one or more of the following parameters: low-density lipoprotein cholesterol (LDL-C) more than 130 mg/dL, high-density lipoprotein cholesterol (HDL-C) less than 40 mg/dL or triglycerides (TG) more than 200 mg/dL. Although many risk factors for cardiovascular diseases have been identified, dyslipidemia together with smoking, hypertension and obesity account for 80% of the observed risk. It is also thought that dyslipidemia may be a prerequisite for cardiovascular diseases beyond being a major risk factor (Kılınçarslan & Şahin, 2020; Kopin & Lowenstein, 2017; Ozyigit et al., 2014; Vekic et al., 2019).

3.1.3. Hypertension

It is known that obesity caused by uncontrolled calorie intake is the main risk factor for hypertension, i.e. blood pressure higher than normal values. In addition, deficiency/excess of vitamins such as C, E, B and minerals such as Ca and K, which should be taken due to an unbalanced diet, also affect blood pressure and cause hypertension (Vasdev et al., 2002). In addition, the frequency of hypertension is twice as high in individuals with a body weight 20% above what it should be compared to individuals with normal weight (Sanrı, 2014).

3.1.4. Diabetes Mellitus

Diabetes mellitus, which is mostly caused by irregular and unbalanced diet, is caused either by insulin deficiency or by the presence of factors that oppose the action of insulin (WATKINS, 2005). In addition, diabetes mellitus is a chronic, broad-spectrum metabolic disorder in which the organism is unable to adequately utilize carbohydrates (CH), fats and proteins, requiring continuous medical care (Akbulut, 2018; Araştırma et al., 2005). The 2019 data of the International Diabetes Federation (IDF) on this disease show that while the number of people living with diabetes was 150 million worldwide in 2000, approximately half a billion people in the 20-79 age group are living with diabetes today (Heimbürger, 1997).

3.1.5. Diet Induced Cancer

Although the occurrence of cancer depends on different causes, environmental conditions take the first place with the highest rate among these causes. It is accepted that the share of nutrition in the disease reaches 70-75% when environmental conditions are included and 35% when evaluated alone (Heimbürger, 1997). Especially in obese individuals, cancer is more common than in individuals of normal weight (Sanrı, 2014). A tumor, which is defined as a physiological disorder, occurs as a result of the proliferation of some cells in the organism. During this process, some cells disappear or their normal biochemical functions change. This change in the cell is divided into benign and malignant. Benign tumors grow at the site of origin, do not spread to the surrounding area and do not cause serious illness or death. A malignant tumor called cancer, on the other hand, spreads from the site of origin to surrounding tissues, causes metastasis and can be fatal depending on the type, host characteristics, nutrition and treatment (Heimbürger, 1997).

3.1.6. Cardiovascular Diseases

Malnutrition is the biggest risk factor for cardiovascular diseases. Heart attacks, strokes, high blood pressure (hypertension), angina (chest pain), poor circulation and abnormal heartbeats are the main

heart diseases. This group of diseases can be prevented by a healthy diet and lifestyle changes or, once they occur, they can be treated with medical treatment, nutritional therapy and lifestyle changes. Reducing the consumption of saturated fats and refined carbohydrates and increasing the consumption of monounsaturated fatty acids and foods with high fiber content are the main goals in improving cardiovascular disease risk factors (Samur, 2008).

4. EATING DISORDERS

Psychiatric illnesses that significantly affect people's eating behaviors and related thoughts and behaviors are called eating disorders. People with eating disorders have an excessive preoccupation with food and their own body weight (Sahin et al., 2008). Although eating disorders are more common than anticipated and can cause serious health problems, they are generally ignored (Keski-Rahkonen & Mustelin, 2016). The most common eating disorders include anorexia nervosa, bulimia nervosa, binge eating disorder, preventive/restrictive food intake disorder, orthorexia, rumination. Although no definite factors can be mentioned about its etiology, more than thirty risk factors that have an effect on eating disorders have been supported by studies. The most important of these are genetic factors, familial factors, interpersonal relationships, cultural values related to body perception, and exposure to the media (Ozcan et al., 2005; Walaszek et al., 2017). One of the most important psycho-social factors such as environmental pressures related to being thin, perfectionist attitudes of the family, peer comparisons related to appearance is social media exposure (Ozcan et al., 2005; Sönmez, 2017).

In prevalence studies, an approximately two-fold increase in eating disorders was observed between 2010 and 2013, and the fact that social media use actively increased between those years is a very interesting phenomenon (Borghuis & Hof, 2008). Social media, a platform where people can access a lot of information very easily, has become a factor where more and more people receive health advice, good nutrition, healthy living, and has the power to shape these trends. With social media being an easy access way to bring people with the same goals and beliefs together, it has become common to use it as a channel to shape the behavior and thoughts of young adults, especially between the ages of 18 and 35 (Cheng et al., 2021; Klassen et al., 2018). Although it is undeniable that social media often reinforces healthy living behaviors such as sharing healthy recipes, creating motivation for exercise, healthy eating, social media can become a place where some people feel pressure on themselves (Rounsefell et al., 2020; Williams et al., 2014). Image-based product marketing on social media, and food and beverages promoted by celebrities with an emphasis on body beauty have a negative impact on the creation of a positive body image, especially for young women. This negative body perception can lead to increasingly psychologically bad feelings and result in eating behaviors that can negatively affect health, such as calorie counting, unhealthy diets, binge eating followed by vomiting and starvation (Rounsefell et al., 2020).

People have a tendency to involuntarily compare themselves with the people they see in their social environment, their peers, and this is called social comparison theory (Festinger, 1954). The fact that social media is frequently used, and people frequently come across the posts of celebrities, influencers, and people from other societies outside their own close circles increases social comparison even more. Such comparisons further reinforce negative body perception and body dissatisfaction. The high correlation between excessive social media use and increased eating disorders due to negative body perception may be based on social comparison theory (Rounsefell et al., 2020). Yet, objectification theory is also associated with eating disorders in the literature. It is a theory based on the promotion of cultures that argue that women exist for the pleasure of other individuals and can exist in society as sexual objects. According to this theory, objectifying oneself internally and objectifying oneself externally through the gaze of a third person increases the hyper-awareness dimension of body perception. Social media sites are platforms where people can share photos and videos as a channel for

this objectification. Other people's comments and the number of likes have also become the means of this objectification (Pektaş, 2021; Rounsefell et al., 2020). Although it is a supported view that social comparison and objectification affect women more with the influence of media, it has been observed that men can also develop negative body image due to social media use (Gordon et al., 2013). Based on these theories, dissatisfaction with one's own body, self-evaluation based on social norms, and a high tendency to conform to so-called social standards may lead to negative body perception and unhealthy eating behavior patterns (Rounsefell et al., 2020).

4.1. Anorexia Nervosa (AN)

Although the majority of cases are female, anorexia nervosa, which is also seen in men, is a condition characterized by extreme thinness and eating behavior disorders (food refusal or bulimia). In addition to eating disorder, anxiety disorder, difficulty in social adaptation and rigid behaviors also accompany this picture. Genetic factors and some environmental risk factors are thought to play a role in the development of Anorexia Nervosa (Kim et al., 2014; Şengül & Hocoğlu, 2019). AN is a psychiatric disorder with a 5-20% mortality rate because it is a disorder that can become chronic and cause dangerous metabolic effects (Kaye, 2009).

4.2. Bulimia Nervosa (BN)

It is an eating disorder characterized by binge eating episodes. The urge to binge eating is the main symptom of the disorder. BN patients feel remorse and guilt after overeating. Fear of being fat, forms the basis of this behavior disorder. The definition of bulimia nervosa as a disease or behavioral disorder was first made by Russell in 1979. Unspecified feeding and eating disorder; eating disorders that are not included in any eating disorder classification according to DSM5 and do not meet the diagnostic criteria are included in this subheading. Even though not many studies have been conducted in this disorder due to the uncertainty of the diagnostic criteria, it is the most common form of disorder among eating disorders (Şengül & Hocoğlu, 2019).

4.3. Orthorexia Nervosa (ON)

Health anxiety, on the other hand, is defined as a psychological condition that occurs with the thought that the health of the individual is in danger and triggers the symptoms of physical and emotional anxiety in the individual. It can cause health anxiety, panic disorder, social phobia, and obsessive-compulsive disorders (Noyes et al., 2003). Obsessive individuals become obsessed with following a perfect diet and develop orthorexia (Mathieu, 2005). When people with health anxiety notice changes in their bodies, they exaggerate this change and experience intense fear. Health anxiety can cause panic disorder, panic attacks, and social phobia (Ayyıldız, 2020). Health anxiety is an important health problem that affects morbidity (Tyrer et al., 2011). Presence of chronic disease is one of the factors affecting health anxiety (Kehler & Hadjistavropoulos, 2009; Rode et al., 2006).

Orthorexia nervosa (ON) means an obsession with healthy eating. In Orthorexia Nervosa, common behaviors are observed with other eating disorders in terms of behaviors such as anxiety about eating and weight gain, a perfectionist structure, and the need for control (Mathieu, 2005).

5. DISCUSSION

The effect of new media on health communication and nutrition reveals the necessity of researching more scientifically, especially academically. It is predicted that the effects of this research on nutritional disorders will change positively when the results of this research are delivered to large masses through new media. Therefore, the new media, which often has a negative effect on malnutrition today, can play a key role in resolving this issue if it is directed in line with these

mindfulness. In addition, one of the effective solutions may be that public institutions develop social projects and provide mass training (especially to people who are interested with home nutrition). Giving importance to the contents that will raise awareness about the subject in schools and public service ads can support the development of this subject in a positive way.

6. RESULTS

Hunger, poverty and malnutrition (malnutrition-obesity), which are among the biggest global problems of today, affect all countries, albeit in different dimensions. The World Health Organization (WHO) acknowledges that the process of malnutrition starts before the birth of the baby and continues until death in the life cycle. Inadequate or malnutrition can lead to cardiovascular diseases, hypertension, dyslipidemia, type 2 diabetes, obesity, osteoporosis, constipation, diverticular disease, iron deficiency anemia, oral mucosa diseases, malnutrition and some types of cancer. Although eating disorders are more prevalent than estimated and can lead to serious health problems, they are often overlooked. Healthy living and dietary behavior, which is one of the foundations of health behaviors, can become an 'unhealthy, life-threatening situation' after a while. Besides physical health, Orthorexia Nervosa negatively affects interpersonal relationships, stress management and mental health. Although there are no definite etiological factors, more than thirty risk factors for eating disorders have been supported by studies. These include genetic factors, familial factors, interpersonal relationships, cultural values related to body image and media exposure. One of the most important psycho-social factors such as environmental pressures to be thin, perfectionist attitudes of the family, peer comparisons related to appearance is social media exposure.

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