Progress in Nutrition 2021; Vol. 23, Supplement 2: e2021265 DOI 10.23751/pn.v23iS2.12079

Original article

Reflection of Eating Awareness and Life Engagement of University Students on the Coronavirus (COVID-19) Pandemic

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Abstract. *Study Objectives:* With the restrictions in the pandemic process and the distance education process, changes have occurred in the diet of students. In such periods, which affect human life in a significant way in terms of public health, nutrition must be managed well. The study was conducted to evaluate the eating awareness of university students during the COVID-19 pandemic period and to examine its relationship with their engagement in life. *Methods:* The population of the cross-sectional study consists of the students of Munzur University. As a precaution regarding the COVID-19 pandemic, the participants were reached on the internet. *Results:* Eating awareness was statistically higher in men, married people, those with normal weight, and older students. While the life engagement among university students was high, the mean scores of eating awareness and its sub-components were moderate. Life engagement was significantly higher in sports science students than students in other academic units. There was a weak but significant relationship between eating awareness and engagement in life. *Conclusion:* Eating awareness of university students during the pandemic is at a moderate level. Students with high eating awareness are attached to life more. The highest life engagement among academic units is among sports science students. There is a need for public health initiatives to increase the awareness of eating among the students, against COVID-19 and possible future pandemics.

Key words: Sports Sciences, University Students, Eating Awareness, Addiction to life, Life Engagement, Mindful Eating.

Introduction

The coronavirus (COVID-19) has turned into a pandemic with the rapid spread of cases from China to the world. While this disease caused by the virus is called severe acute respiratory syndrome coronavirus-2 (SARS-COV-2), the World Health Organization (WHO) has named this disease as coronavirus disease (1).

Infectious diseases spread throughout the world are health problems that affect people from many aspects such as social, economic, and quality of life. When we look at its impacts in the world, it appears as the cause of many different and deep chains of events, from nutrition to architecture, as well as the collapse of states.

Turkey is among the countries that took the earliest measures against COVID-19 in the world. In this context; Turkey took precautionary measures for the main cause of the disease (detection of the source, declaration of the disease, definitive diagnosis, treatment, detection of carriers, surveillance of suspects,

education about the disease), for the tendency of transmission (improvement of environmental conditions, control of food and beverage items in terms of nutrition, cleaning of individuals and the use of protective materials control of travel and movements of the population) and for healthy individuals (observation and quarantine) and continued to manage the process in this direction (2).

WHO has defined health as a state of complete well-being, not only physically but also mentally and socially. Nutrition, which is the key point of being healthy, comes into prominence in terms of social and psychological aspects as well as its physiological aspect. Balanced and adequate nutrition should be given importance in order to protect and maintain health (3,4).

For a country; reaching the level of development and being able to compete with other countries on international platforms; is related to intellectually, mentally, spiritually, physically and socially healthy, strong and talented individuals. Ensuring this situation in individuals is also related to gaining healthy eating behaviors starting from the family environment (5). The acquisition of healthy eating habits can have many positive effects on individuals, such as maintaining growth and development, protection from diseases, getting away from mental problems, regulating mental and physical functioning, and regulating the immune system (2).

Healthy nutrition and physical activity play an important role in controlling non-infectious diseases such as diabetes and obesity. Since the first COVID-19 case was seen in Turkey, different measures and restrictions were gradually introduced to the citizens. Because of these reasons; spending time in isolation at home, being inactive during the day and the decrease in energy expenditure have affected the nutritional balance and physical activity of individuals (6). Besides, the quarantine period also affected the eating habits of the societies and enabled the storage of processed foods with extended shelf-life. The uncertainty and stress caused by being isolated during the epidemic increased the risk of obesity by triggering individuals to eat irregularly (7). The Ministry of Health and WHO recommend adequate and balanced nutrition in order to reduce susceptibility and long-term complications caused by COVID-19. In addition, healthy foods should be consumed selectively (8).

Eating awareness; is to be aware of the behaviours of "why and how to eat", beyond "what to eat. Additionally, awareness of eating can be expressed as the awareness of the power of thoughts and feelings, internalizing the concepts of hunger/satiety physically, and concentrating on the food to be consumed at the current time and place without being influenced by environmental factors (9). Eating awareness continues until the last bite, starting with the first thought of consuming the food (10). The insufficient development of eating awareness in individuals causes many environmental and social problems related to nutritional behaviors. Eating awareness allows making intentional choices in awareness against unconscious eating behaviors. For this reason, it is an effective trend in preventing unhealthy and unconscious eating habits (11). In addition, it is known that eating awareness is beneficial in weight control and treatment of obesity (12,13).

Individuals have tried to make sense of the existence of the universe and themselves in their lives. The behavior of making sense of the meaning of life and the limited life of the individual is the reality of human existence. One of the features which distinguish human beings from other beings is the desire to have a sense of meaningfulness. Although the individual who questions what the purpose of his life is, what he expects, why he is at the current location, what he is going through, tries to answer these data about life, the factors that connect people to live contain subjective qualities. Since the individual can't plan his own life, individuals have to produce their specific meanings. They search for the meaning of life in their lives, find it and make their choice. Assuming that each person is the creator of his meaning of life, it is a fact that almost all the feelings, attitudes, ideas and behaviors of the individual match his/her purpose and meaning of life. In this sense, it can be said that the struggle of people to reach their life goals regarding the purpose and meaning that they determine for themselves, is an important indicator of their engagement in life. This strengthens the meaning of life. Individuals with a high level of life engagement have strong reasons for surviving and holding on to life (14).

This study was conducted to evaluate the eating awareness of university students during the coronavirus pandemic period and to determine its reflections on their life engagement.

Materials & Methods

Scope of the Research

The population of this cross-sectional study consists of 6368 students studying at Munzur University. The minimum number to be sampled was determined as 363 from the formula [$n = (N*t^{2}*p*q) / (d^{2}*(N- 1) + t^{2}*p*q)$] applied for survey studies with known population numbers. Since the correlation was also investigated in the study, 463 people were included. The sample was created proportionally, taking into account the number of students of the academic units affiliated with the university. The sampled students were reached by a simple random method.

Data Collection and Evaluation

Data were obtained from the students who accepted to participate in the research, between 01.07.2021 and 20.07.2021. Due to the COVID-19 pandemic period, the data were collected through an online survey system on the internet. The Eating Awareness Scale and Life Engagement Scale were used as data collection tools, along with a questionnaire prepared by the researchers in accordance with the purpose of the study. The Life Engagement Scale, developed by Scheier et al. in 2006, and validated and proved by means of reliability in Turkish by Uğur E and Akin A, in 2015, consists of 6 items and a single dimension. Each item of the scale has a 5-point rating ("1" I strongly disagree- "5" I completely agree), and the 1st, 3rd, and 5th items are reversely coded (14, 15). The Eating Awareness Scale was developed in 2009 by Framson et al. as the Mindful Eating Questionnaire (MEQ) and validated and proved by means of reliability in Turkish by Köse et al., in 2016. The scale consists of 30 items in a 5-point Likert style (Never, Rarely, Sometimes, Often, Usually/Always) and items 1, 7, 9, 11, 13, 15, 18, 24, 25, and 27 are scored ordinarily (9,16).

Statistical Analysis

Kolmogorov-Smirnov test was used to measure the normality of the data. In addition, the histogram graph was also used to evaluate the normality of the data. In the statistical analysis; Independent samples t, one-way ANOVA and Pearson correlation tests were used and $p<0.05$ was considered as significant.

Research Ethics

The ethical approval of this study was approved by the decision of the Munzur University Rectorate Non-Interventional Research Ethics Committee numbered 2021/10-01.

Limitations of the Research

The results of the study include students of Munzur University. The scope of the research can be expanded by working on more universities.

Results

The comparison of sociodemographic characteristics and some health characteristics by means of eating awareness about 463 people participating in the study are presented in Table 1.

Eating awareness score was statistically significantly higher for males than for females, and for married individuals than for singles. In addition, there was a statistically significant correlation between eating awareness score and BMI, as well as age ($p<0.05$). Those who were over 25 years old and those who had a normal BMI had a higher awareness of eating.

The comparison of sports science students with students in other academic units regarding eating awareness and life engagement is given in Table 2.

The mean life engagement score of sports science students was statistically significantly different from the students studying in other academic units ($p<0.05$).

Table 1. Comparison of sociodemographic characteristics and some health characteristics of the participants regarding eating awareness

Variables			n	Mean	[b]SD		p
Gender	Male		168	103.63	12.11	[c]t=2.278	0.023[a]
Female		295	100.75	13.59			
Marital Status	Single		437	101.39	12.97	[c]t=-2.699	0.007[a]
Married		26	108.50	14.35			
Education	Associate Degree		184	101.90	12.97	[d]f=0.025	0.975
Licence		261	101.68	13.22			
Graduate		18	102.22	14.19			
Income	0-2000 [f]TL		370	101.48	13.23	[d]f=2.662	0.071
2000-5000 TL		69	101.39	11.79			
5000 and Above		24	107.79	14.35			
Age	18-21		275	100.99	13.12	[d]f=3.577	0.029[a]
22-25		145	101.84	12.59			
26 and Above		43	106.72	14.23			
[c]**BMI**	Weak		68	100.82	13.68	[d]f=3.877	0.021[a]
Normal		325	102.78	12.67			
Fat / Obese		70	98.13	14.17			
Cigarette	Smoking		142	101.00	13.74	[c]t=-0.861	0.390
Not Smoking		321	102.14	12.87			
Alcohol	Using		72	101.08	13.49	[c]t=-0.497	0.620
Not Using		391	101.92	13.08			

[a]p<0.05, [b]SD; Standard Deviation, [c]t; Independent Samples t Test, [d]f; One-Way Anova Test, [c]BMI; Body Mass Index , [f]TL; Turkish Lira

Table 2. Comparison of sports science students and other academic unit students by means of eating awareness and engagement in life

Eating Awareness					
Variables	**n**	**Mean**	[b]**SD**	[c]**t**	**p**
Faculty of Sports Sciences	115	102.86	12.73	1.008	0.314
Other Academic Units	348	101.44	13.27		
Life Engagement					
Faculty of Sports Sciences	115	24.96	4.34	2.215	0.028[a]
Other Academic Units	348	23.88	5.09		

[a]p<0.05, [b]SD; Standard Deviation, [c]t; Independent Samples t Test,

The mean scores of eating awareness, its sub-components, and life engagement of the participants are presented in Table 3.

While the life engagement scores of the students were high, it was seen that the mean scores of eating awareness and its sub-components were at moderate levels.

The correlation between eating awareness and life engagement of the students participating in the research is presented in Table 4.

There is a weak but significant relationship between eating awareness and life engagement of the students (p<0.05). Students with high eating awareness are more attached to life.

Table 3. Scores of eating awareness, its sub-components, and life engagement of the participants

Variables	n	Mean ± SD	Min	Max
Eating Awareness	463	101.79±13.13	62	136
Disinhibition	463	17.38±3.82	7	25
Emotional Eating	463	17.55±5.02	5	25
Eating Control	463	15.67±3.28	4	20
Mindfulness	463	16.08±2.25	9	23
Eating Discipline	463	11.68±3.18	5	20
Conscious Nutrition	463	15.97±2.76	9	24
Interferences	463	7.47±1.56	2	10
Life Engagement	463	24.14±4.93	6	30

SD; Standard Deviation, Min; Minimum, Max; Maximum

Table 4. The relationship between eating awareness and addiction to life among the participants

		Life Engagement
Eating Awareness	r*	0.305
	p	0.000
Disinhibition	r*	0.088
	p	0.059
Emotional Eating	r*	0.138
	p	0.003
Eating Control	r*	0.262
	p	0,000
Mindfulness	r*	0.240
	p	0.000
Eating Discipline	r*	0.301
	p	0.000
Conscious Nutrition	r*	0.136
	p	0.003
Interferences	r*	0.157
	p	0.001

*Pearson Correlation Test

Discussion and Conclusion

Depending on the restrictions applied due to COVID-19 and the transition of students to the distance education system, there is a differentiation in the nutrition of individuals. It is thought that these differences may be related to the prolongation of the time spent at home during the isolation and distance education process, as well as the formation of free time allocated for preparing food and cooking. In the researches on nutrition and dietary habits during the pandemic period in other countries, it has been determined that there are differences in the nutritional tendencies of individuals due to reasons such as lack of stimulus, isolation, and boredom and that they cannot adhere to their dietary habits. It has been stated that the stress experienced due to dietary irregularities and changes, physical activity deficiencies during the day, and inability to adapt to different processes experienced in individuals with the restriction practices during the COVID-19 period, may increase the probability of encountering osteoporosis, depression, and cardiovascular diseases, and especially obesity (17).

Preventing wrong eating behaviors due to mood changes during restriction periods, maintaining weight control of the body, and strengthening the immune system are important trends (18). It is known that students who move away from their family life to study at the university encounter factors such as a new environment, social media, time constraints, and different friend groups in terms of nutrition choices. It can be said that healthy eating behaviors to be acquired during the transition to adulthood will benefit individuals in many different ways (19).

In this study conducted on university students, the eating awareness score of male individuals was statistically significantly higher than females, so was the case for married individuals compared to singles.

In addition, there was a statistically significant correlation between eating awareness score and BMI, as well as age. Individuals aged over 25 years and individuals with normal BMI had higher awareness of eating. There are studies in literature, with results that demonstrate that increasing awareness of eating leads to a decrease in BMI (20). This situation is in line with our study. In another study, no relationship was found between BMI and eating awareness (21). The expectation of food from each other, the culture of eating together, the development of family communication, and the formation of a more organized life with marriage might have increased the awareness of eating in married people. Regarding gender, eating awareness in boys was statistically significantly higher than in girls. It may be since marriage is more common in boys than girls in education life and that there is more individuals with normal BMI among boys than among girls.

In the study, the life engagement score of the Faculty of Sport Sciences students was found to be statistically significantly different from the students studying in other academic units. When other studies were examined regarding the total food awareness scores of the students who were educated and not educated at the School of Physical Education and Sports, it was seen that the scores of the students who were educated at the School of Physical Education and Sports were higher (22). In this study, we realize that as the eating awareness of the students of the Faculty of Sports Sciences increases, their engagement in life also increases. The fact that the students of the Faculty of Sports Sciences are constantly engaged in physical activities during their education may have increased their life energy by enabling them to transform their education into an entertaining process. Performing regular physical activities during the day, combined with a healthy diet, is an important tool in the prevention of many diseases (23).

Re-attribution of meaning to their lives and determining their life goals; contributes to the formation of positive feelings and thoughts for the individuals. It is seen that individuals who attempt to achieve their goals after determining their goals have a better state of well-being than those who do not attempt (24). Individuals with a high awareness of eating can better plan their lives for a purpose. In this study, a weak but significant relationship was found between eating awareness and life addiction. It was observed that students with high eating awareness were more attached to life. Or it is another possibility that students with a greater love of life may have increased their awareness of eating.

As a result, university students' awareness of eating during the pandemic is at moderate levels. In addition, students with high awareness of eating are more attached to life. The highest life engagement among academic units is among sports science students. There is a need for public health initiatives to increase students' awareness of eating against COVID-19 and possible future pandemics.

The results of this study can be generalized to the university. However, studies covering many universities are required for a more generalized conclusion. Furthermore, also after the COVID-19 pandemic; the eating awareness and life engagement of the students can be evaluated and compared with their situation during the pandemic period.

Conflicts of interest: The authors declare that there is no conflict of interest regarding this study.

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