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THE EFFECTS OF INTUITIVE EATING ON MENTAL WELL-BEING AND EATING BEHAVIORS OF HEALTH WORKERS

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Abstract

Objectives: Intuitive eating is identified as eating by hearing to and adapting to the physical hunger, satiety and satisfaction reactions given by the body naturally. The aim of this study was to research the effects of intuitive eating on mental well-being and eating behaviors in healthcare workers.

Materials and Methods: The plan of this study included all health workers in the state hospital in Edirne. The questionnaires were filled by the researchers according to the answers given by the participants to the questions. The five sections in the questionnaire consist of demographic information, anthropometric measurements, Beck Depression Inventory (BDI), The SCOFF Questionnaire to screen for eating disorders and the Intuitive Eating Scale-2 (IES-2). Health workers were separated into two groups according to the intuitive eating scale-2 median score (Group 1: below 3.60; Group 2: 3.60 and above).

Results: The participants' IES-2 mean score was 3.50 ± 0.59 (1.50 - 4.80). The BDI mean score of the participants in Group 1 was higher than that of those in Group 2. The number of participants with normal mental well-being according to the BDI score was lower in Group 1 than in Group 2. The number of participants exhibiting risky eating behavior according to the SCOFF score was higher in Group 1 than in Group 2.

Conclusion: The health workers who ate intuitively had better mental well-being and fewer eating disorders than those who did not intuitively eat.

Keywords: Intuitive eating, mental well-being, eating behaviors, health worker.

Introduction

Adequate and balanced nutrition constitutes the basis of health in every period of life. Adequate and balanced nutrition is only possible with good eating habits. Eating disorders are problems that occur in eating behavior, usually based on emotional problems. People with eating disorders have an obsession with food and excess weight. They think about which food they eat, how much they eat and the calories they take for a significant part of the day.[1,2]

The concept of "intuitive eating" was first introduced in 1995 by Tribole and Resch.[1] It is based on three basic approaches: unconditional allowance to eat, eating based on physical causes rather than emotional reasons, and eating based on physical hunger and satiety signals. Intuitive nutrition is a holistic alternative approach to diet and restrictive nutrition methods.[1,3,4] Tribole and Resch[1] formed the intuitive eating concept after observing that participants who lost weight with dietary restriction resorted to increased body weight after a diet, and those with eating behavior disorders resorted to impaired eating behaviors after reaching a healthy body weight with diets with energy intensity. Studies propose that more intuitive eaters have preferable behavioral health, lower body mass index (BMI), and more healthy weight histories than less intuitive eaters.[3,5-8] More importantly, it has been suggested that high intuitive eating, beyond its contributions to diet and nutritional disorders, is uniquely beneficial for individuals' psychological states.[9-11] The results of Hazzard et al.'s study showed that intuitive eating estimates better psychological and behavioral health also in the long term.[12]

Although there are few studies examining the effects of intuitive eating on nutritional behaviors, there is no study examining the interrelation between intuitive eating and mental well-being in Turkey.[13,14] The goal of this study was to research the effects of intuitive eating on mental well-being and eating behaviors in healthcare workers.

Materials and Methods

Study Design and Sample Selection

This cross-sectional study included all health workers working in the state hospital in Edirne between January and February 2020. Out of the 269 health workers in the hospital, 200 (74.35%) had agreed to attend and were included in the study. The informed consent form was distributed to the participants before starting the study, and a questionnaire was applied to those who agreed to attend the study. The questionnaires were filled by the researchers according to the answers given by the participants to the questions. The five sections in the questionnaire consist of demographic properties (age, gender, educational status, marital status),

anthropometric measurements, Beck Depression Inventory (BDI), The SCOFF Questionnaire to screen for eating disorders and Intuitive Eating Scale-2 (IES-2). Participants were separated into two groups according to the IES-2 median score (Group 1: below 3.60; Group 2: 3.60 and above).

Anthropometric Measurements

The body weight of the participants was measured on an empty stomach, in light clothing and without shoes, using a digital scale with a weight measurement sensitivity of 0.10 kg. Height measurement was measured using a stadiometer with the feet side by side and the head on the Frankfort horizontal plane. BMI was calculated by the formula "weight (kg)/[height (m)]^2". BMI scores are classified into four groups: underweight (≤18.50); normal weight (18.60–24.90); overweight (25–29.90); and obese (≥30).[15]

Beck Depression Inventory

The BDI, advanced by Beck et al., was employed to define the risk in terms of depression and to evaluate the level and severity of depressive symptoms.[16] This form, which includes a total of 21 self-assessment items, ensures a four-point Likert-type measurement with each item scoring between 0 and 3. The total high score indicates the high severity of depression. 0-9 points are interpreted as no depression, 10-16 points as mild, 17-29 points moderate, and 30-63 points as severe depressive symptoms.[16,17] The Turkish validity and reliability study was performed by Hisli[17,] and the Cronbach alpha reliability coefficient was found to be 0.80.

SCOFF Questionnaire

The SCOFF (Sick, Control, One, Fat, Food) Questionnaire advanced by Hill et al. in 2010 was used to investigate the risk of eating disorders.[18] The Turkish validity and reliability study was performed by Aydemir et al.[19] The Cronbach alpha reliability coefficient was found to be 0.74, and it can distinguish 81% of previously undetermined eating disorder cases.[16,17] The scale, which questions eating control, taking out what they eat and body dissatisfaction, consists of 5 questions. Individuals scoring 2 or more points on the scale where each item is given 1 point are considered at risk for an eating disorder.[18,19]

Intuitive Eating Scale - 2

The IES-2, developed by Tylka and Kroon Van Diest in 2013, was used to evaluate intuitive eating.[9] In the IES-2, a five-point Likert scale consisting of 23 items ranging from "strongly agree" to "strongly disagree" is used. Mean scores are evaluated for the total scale and each subscale, and higher scores indicate those who consume more intuitive eating. The sub-factors of the scale are unconditional permission to eat, eating for physical

reasons rather than emotional reasons, trusting hunger satiety signals, and body food selection compliance.[9] The Turkish validity and reliability of IES-2 have been reported by Bas et al.[13]

Statistical Analysis

The Statistical Package for Social Sciences (SPSS) (version 22.0; SPSS Inc., 2016) was used for Statistical evaluation in this study. After analyzing the normality of the dispersion of the quantitative data by the Kolmogorov-Smirnov test, the Student t-test was employed in distanced groups to compare the means of scores that fulfill the parametric test hypothesis and a Mann-Whitney U test was employed in cases where not met. The chi-square test was employed in the assessment of categorical data. Pearson's test was employed for correlation analysis. Descriptive statistics were shown as a mean ± standard deviation (minimum-maximum), numbers and percentages, and $p < 0.05$ was accepted as the limit of significance.

Results

The mean age of the participants is 33.53 ± 8.24 (18 - 61) years. Of the 200 health workers in the study, 118 (59%) were women, and 82 (41%) were men. Forty-five (22.50%) participants were doctors, and 155 (77.50%) were nurses. One hundred twenty-one (60.50%) participants were married, and 79 (39.50%) were single. Sixty-six (33%) participants finished high school, 109 (54.50%) finished university and 25 (12.50%) finished postgraduates.

The participants' IES-2 mean score was 3.50 ± 0.59 (1.50 - 4.80). The mean scores of the IES-2 and its subscales are shown in Table 1. There was no significant difference in the IES-2 means score according to gender, marital status and educational status ($p = 0.653$, $p = 0.657$, $p = 0.349$, respectively).

Table 1. Intuitive Eating Scale-2 total and subscales scores of participants

Intuitive Eating Scale-2 total score and subscales	Mean ± SD
Intuitive Eating Scale-2 total score	3.50 ± 0.59
Eating for physical rather than emotional reasons	3.38 ± 0.74
Unconditional permission to eat	3.23 ± 0.55
Reliance on hunger and satiety cues	3.59 ± 0.80
Body-food choice congruence	3.91 ± 0.87

(SD: Standard Deviation)

There were 92 (46%) participants in Group 1 with an IES-2 median score below 3.60 and 108 (54%) participants in Group 2 with an IES-2 median score of 3.60 and above. The BDI mean score of those with an IES-2 score below 3.60 (Group 1) was 12.84 ± 8.42, while for those who were 3.60 and above (Group 2), it was 9.71 ± 6.52. The BDI mean score of the participants in Group 1 was significantly higher than that of those in Group 2 (p = 0.004). Moreover, the number of participants with normal mental well-being according to BDI score in Group 1 was lower than that of Group 2 (Table 2). The Pearson correlation analysis revealed that as the IES-2 scores of the participants increased, the BDI scores decreased (Table 3).

The mean SCOFF score of those with an IES-2 score below 3.60 (Group 1) was 1.25 ± 1.37, while for those who were 3.60 and above (Group 2), it was 0.59 ± 0.95. The mean SCOFF score of the participants in Group 1 was significantly higher than that of those in Group 2 (p<0.001). Moreover, the number of participants with risky eating behavior according to the SCOFF score (n=23, 25%) in Group 1 was significantly higher than that for Group 2 (Table 2). The Pearson correlation analysis revealed that as the IES-2 scores of the participants increased, the SCOFF scores decreased (Table 3).

Table 2. The mental well-being and eating disorder risk of participants according to IES-2

	Group 1 (n=92)	**Group 2 (n=108)**	***p***
BDI score, mean ± SD	12.84 ± 8.42	9.71 ± 6.52	**0.004***
Mental well-being according to BDI score, n (%)			
Normal (0-9)	33 (35.87)	57 (52.78)	
Mild depression (10-16)	38 (41.30)	35 (32.41)	**0.046†**
Moderate depression (17-29)	16 (17.39)	15 (13.89)	
Severe depression	5 (5.44)	1 (0.92)	
SCOFF score, mean ± SD	1.25 ± 1.37	0.59 ± 0.95	**<0.001***
Eating disorder risk according to SCOFF score, n (%)			
Risk free	69 (75)	100 (92.59)	**0.001†**
Risky	23 (25)	8 (7.41)	

(* Mann-Whitney U test, † Chi-square test, IES-2: Intuitive Eating Scale-2, BDI: Beck Depression Inventory, SD: Standard Deviation)

There was no statistically significant difference in the weight and BMI means scores according to IES-2 (p=0.411 and p=0.273, respectively). Nevertheless, the mean score of IES-2 (3.10 ± 0.79) in obese participants according to BMI was statistically lower than that of underweight, normal and overweight participants (3.77±0.58, 3.53±0.58, and 3.53±0.55, respectively) (p=0.044). Also, the Pearson correlation analysis showed that as the IES-2 scores of the participants increased, their weight decreased (Table 3).

Table 3. Correlation between the Intuitive Eating Scale scores and the Beck Depression Inventory and the SCOFF Questionnaire scores and weights in the health workers

	n	r	*p* *
IES-2 - BDI scores	200	-0.209	**0.003**
IES-2 - SCOFF Questionnaire scores	200	-0.306	**<0.001**
IES-2 – Weights of health workers	200	-0.146	**0.040**

(* Pearson's test, IES-2: Intuitive Eating Scale-2, BDI: Beck Depression Inventory, SCOFF: Sick, Control, One, Fat, Food)

Discussion

In our study, the health workers with high IES-2 scores had lower BDI and SCOFF scores. The number of health workers with normal well-being was higher in the group with a high IES-2 score. Also, it was determined that as the IES-2 scores of the participants increased, their weight decreased.

Intuitive eating is described as eating by hearing to and adapting to the physical hunger, satiety and satisfaction reactions given by the body naturally. It is basically the knowledge of the amount and type of nutrients the body needs, which is developed as evidence for the control of body weight without a special health problem. As long as the individual who eats intuitively has no chronic disease, the individual instinctively prefers foods in a way that ensures nutritional balance and thus increases the variety of food. Intuitive eating emphasizes a real harmony of body, food and mind in the individual.[1]

Higher intuitive eating was associated with better psychological and behavioral health, according to studies on intuitive eating.[3,5,10,11] Intuitive eating was inversely related to negative emotion and depressive symptomatology.[5] Shouse and Nilsson showed that higher intuitive eating levels were related to greater emotional awareness.[20] Schoenefeld and Webb discovered a positive relationship between intuitive eating and distress tolerance.[21] The results of Hazzard et al.'s study showed that intuitive eating predicts better psychological and behavioral health also in the long term.[12] The higher intuitive eating was related to less

depressive symptoms and a more positive mood in our study, consistent with these studies. Also, the correlation analysis showed that as the IES-2 scores of the participants increased, the BDI scores decreased. It may be thought that people who eat intuitively are better mentally because of their ability to differentiate between biological and emotional hunger and organize emotions with alternative strategies.

Studies had shown that intuitive eating was inversely associated with symptoms of eating disorders and was negatively related to food occupation and binge eating behaviors.[5,11,19,22] In addition, intuitive eating was found to be negatively associated with restricted eating patterns, such as little or no eating.[22] It was found that eating disorders decreased with increasing intuitive eating in a study.[5] In our study, it was found that participants with high intuitive eating scores had lower eating disorder scores, and the number of people with eating disorder risk was lower among these participants. Also, the correlation analysis revealed that as the IES-2 scores of the participants increased, the mental well-being scores decreased. These results show that people who eat intuitively have a more nutritious diet intake, healthier eating behaviors, and more positive eating patterns than those who do not intuitively eat.

Many cross-sectional studies have shown that intuitive eaters have lower BMI than those who do not intuitively eat.[3,6,7] This relationship could not be shown only in the studies of Augustus-Horvath and Tylka and Hawks et al.[23-24] In addition, it was found that the intuitive eating approach helped maintain weight in overweight and obese women.[3] There is evidence that an intuitive eating program can help maintain weight, although the traditional diet can initially lead to weight loss and then regain weight[3,25] and, completing an intuitive eating program can result in weight loss.[3] There was no significant difference in the weight and BMI means scores according to IES-2 in our study. Nevertheless, the mean score of IES-2 in obese participants according to BMI was statistically significantly lower than that of underweight, normal and overweight participants. Also, the correlation analysis showed that as the IES-2 scores of the participants increased, their weight decreased. These data showed that intuitive eating practices could help maintain weight, especially in the long term.

The superior aspect of our study is that it is the first study in Turkey to research the relationship between intuitive eating and mental well-being. Some limitations of this study are that we conducted a study of health workers from only one hospital. The number of health workers was low, which may have affected the results. External stressors, years of experience, and a previous history of anxiety/depression were not investigated. These limitations may have influenced the results of the study.

As a result, the health workers who ate intuitively had better mental well-being and fewer eating disorders. Also, the intuitive eating scores of the participants were negatively associated with their weight. In order to increase intuitive eating, intuitive eating programs should be arranged in schools and primary health care centers within the scope of preventive medicine.

Ethical considerations: Ethical approval was acquired from the Trakya University Ethics Committee (TÜTF-BAEK-2019/466).

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