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they are effective in the development of disordered eating behaviours [1]. Although women are less likely and have a harder time achieving the media-imposed thinness, they are more likely than men to receive negative criticism about their bodies and to be discriminated against if they are overweight. Therefore, it is to be expected that women are more likely to be dissatisfied with their bodies and to be more likely to diet than men [2]. There is a relationship between the frequency with which a person compares their physical appearance to that of those they follow on social media and body dissatisfaction and the desire for thinness [3]. There are some theories that can help us better understand the impact of social media on body image and eating behaviors. The sociocultural theory emphasizes that individuals feel a strong need to conform to body ideals, and this interaction is shaped by social factors (family, peers, media). Social media, in particular, allows individuals to constantly review their body image, make comparisons, and internalize the ideal of thinness. This can lead to eating disorders and compensatory eating behaviors. Feminist theory argues that women internalize a third-person perspective on their appearance, which leads to habitual body surveillance and dissatisfaction. Social media further deepens this process, as users create idealized online personalities while experiencing a mismatch with their less perfect real bodies. This mismatch can lead to body image concerns and compensatory eating behaviors. Social identity theory posits that individuals form their identity through group memberships, and on social media, body-related norms can be reinforced through online communities such as weight loss groups. These groups can shape body image and eating behaviors. The Uses and Gratifications theory suggests that individuals select

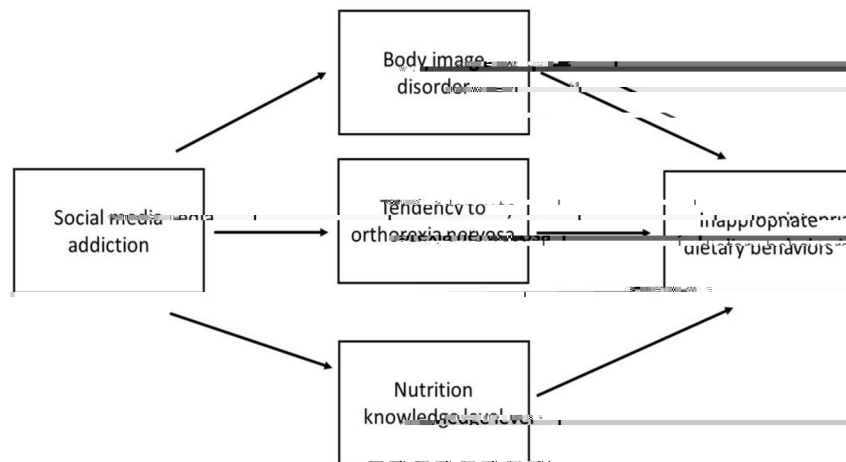


Fig. 1 General plan of the study

Subjects and methods

Study design, participants, and procedure

The sample size in the study was determined as at least 330 people using the G-POWER 3.1 package program, taking into account literature data, 90% power and $\alpha = 0.05$. This study was conducted with female volunteers between the ages of 18 and 60 years. The responses of 613 volunteer women were evaluated within the scope of the study. Data were collected between December 2021 and February 2022. Individuals under the age of 18 or over the age of 60, those who were pregnant or breastfeeding, and those with mental illness were not included in the research. In order for the survey to be understandable and accurately answered by the participant, those with mental illness; pregnant women, since body weight measurements cannot be taken during pregnancy; and breastfeeding women, since current body weight measurements will not reflect overall body weight, were excluded from the study. In addition, the physiological increase in body weight of pregnant and breastfeeding women may be a possible cause of deterioration in their body perception.

The individuals participating in the study first read the Informed Consent Form located in the introductory section of the administered questionnaire. They were given brief information about the purpose of the study, its methodology, the voluntariness of participation, and assurances of anonymity and confidentiality. The voluntary consent form was then signed by the participants. A pilot study was first carried out with 30 individuals and changes were made to questions that were not comprehended fully. The finalized questionnaire forms were administered by the researchers to participants face to face in a comfortable and calm setting and were completed in approximately 20 min. Questionnaire forms

were completed by the individuals participating in the study and incomplete forms were not evaluated.

General plan of the study is given in Fig. 1.

Data collection and evaluation

The questionnaire form used in this study consisted of 7 sections encompassing demographics, anthropometric measurements, and 4 scales. These sections included a form for general information (6 items), a form for anthropometric measurements (3 items), the Bergen Social Media Addiction Scale (BSMAS) (6 items), the ORTO-R Scale (6 items), the General and Sport Nutrition Knowledge Questionnaire (GeSNK) (29 items), and the Body Shape Questionnaire (BSQ-34) (34 items).

General information

This section included questions about the participant's age, education level, occupation, presence of chronic diseases, and whether the participant followed nutrition-related information on social media or engaged in physical activity.

Measures

Bergen Social Media Addiction Scale (BSMAS)

The BSMAS [22] is an adaptation of the Bergen Facebook Addiction Scale [23] and it contains 6 items reflecting the core addiction elements of salience, conflict, mood modification, withdrawal, tolerance, and relapse [24]. Each question is answered based on experiences during the past year using a 5-point Likert-type scale, with responses ranging from 'very rarely' (1 point) to 'very often' (5 points), thus yielding total scores in the range of 6 to 30. Monacis et al. [25] showed that the Italian version of the BSMAS in the 16–40 age group fitted the model to the data excellently, thus confirming the single-factor

structure of the scale. The scale's Cronbach alpha value was found to be 0.877 in this study.

ORTO-R scale

The ORTO-R scale, developed by Rogoza and Donini [26], contains 6 items. It is a revised version of the 15-item ORTO-15 scale developed by Donini [27] because the ORTO-15 scale showed an unstable factor structure in different populations. There is no cut-off point for this scale. Individuals are not classified as having ON according to their ORTO-R scores; thus, the scale does not report a prevalence rate. Instead, the scores obtained from the scale are used for comparisons between groups. Kaya et al. [28] showed that the Turkish version of ORTO-R is a valid and reliable tool to assess orthorexic behaviors in the adult populations in a theoretically meaningful way. We found the Cronbach alpha value is 0.766 in this study.

General and Sports Nutrition Knowledge Questionnaire (GeSNK)

In this study, the 29-item General Nutrition Knowledge section of the GeSNK was used. The scale was developed by Calella et al. [29]. The first 8 questions address the macro- and micronutrient contents of some foods and the possible responses are 'high', 'low or not present', and 'I don't know'. For 20 questions, the possible responses are 'true', 'false', and 'I don't know', while one question is a multiple-choice question. One point is assigned for correct answers, while wrong answers and responses of 'I don't know' receive 0 points. The maximum score for the General Nutrition Knowledge section is 64. Scores of less than 32 signify low nutrition knowledge and scores of more than 40 signify high nutrition knowledge [29]. We found Cronbach alpha value is 0.951 in this study.

Body Shape Questionnaire (BSQ-34)

The BSQ-34, developed by Cooper and Taylor [30], measures concerns about body shape among females. It comprises 34 items, which participants are asked to score on a scale of 1 to 6 (1: 'never', 2: 'rarely', 3: 'sometimes', 4: 'often', 5: 'very often', and 6: 'always'). The total score is calculated by adding the points given for each item. The lowest possible score is 34 and the highest is 204, with higher scores indicating an increase in body dissatisfac-

Table 4 Classification of female's ORTO-R, BSMAS, BSQ- 34 and GeSNK scores according to age, education level and BMI

who were satisfied with their body weight, those who were not satisfied with their body weight and wanted to lose weight, and those who were not satisfied with their body weight and wanted to gain weight ($p = 0.000$, $p = 0.028$, $p = 0.000$, and $p = 0.000$, respectively). The mean ORTO-R, BSMAS, and BSQ- 34 scores of females on diets (19.24 ± 4.84 , 18.27 ± 5.86 , and 101.30 ± 40.92 , respectively) were higher than those of females who were

It has been shown that BSQ-34 scores increase as BMI increases in females [62], and obesity and higher body weight are also associated with worse body shape trajectories [63]. Similar to the literature, a positive correlation was found in this study between BMI values and BSQ-34 scores, with BSQ-34 scores increasing significantly as BMI increased ($p < 0.05$) (Table 4). In a previous study, younger age was associated with body dissatisfaction [64]. In the present study, the highest rate of body dissatisfaction was seen among females aged 36–60, but the difference between age groups was not statistically significant ($p = 0.570$) (Table 4).

In this study, a statistically significant difference was found between ORTO-R scores according to body weight satisfaction ($p < 0.005$). The ORTO-R scores of participants who wanted to lose body weight were found to be higher than those of participants who were satisfied with their body weight and those who wanted to gain body weight. Pauze et al. [65] showed that individuals who are more successful in following a healthy diet want to lose more body fat. It has also been reported that those who have been on at least one diet in their lives have more severe orthorexic behaviours [66] and that dieters have higher ON scores than those who have not been on a diet [67]. Furthermore, 77% of individuals who followed popular diets were found to be at risk of orthorexic behaviour at some point in their lives, and individuals who previ-

[86] found that participants who followed webpages with healthy nutrition and sport-exercise recommendations had an increased ON risk when compared to those who did not follow those pages. In this study, a positive moderate correlation ($r = 0.475$, $p < 0.05$) was found between BSMAS and ORTO-R scores (Table 7). Taken together, these results suggest that social media usage may lead to disordered eating behaviours and body dissatisfaction.

Some researchers suggest that ON is different from other eating disorders, with disturbed body perceptions being less obvious in cases of ON. Nonetheless, the perfectionism generally seen in ON can disrupt the individual's body perceptions [87]. Perfectionism scores of individuals with high tendencies towards ON were higher compared to individuals with low ON tendencies [66]. Furthermore, Messer et al. [88] found that higher scores for overevaluation, dissatisfaction, preoccupation, body control, and body image avoidance were associated with increases in ON symptoms. In the study conducted by He et al. [89], however, ON was found to be associated with positive body image. In the present study, a positive moderate correlation ($r = 0.685$, $p < 0.05$) was found between ORTO-R and BSQ-34 scores (Table 7). Previous findings in the literature support this result. For example, one study found that orthorexic behaviours were less common among students who had more knowledge about nutrition [90]. In another study, greater ON intensity was found to correlate with higher levels of nutrition knowledge [91]. In the study conducted by Plichta and Jezewska-Zychowicz [92], however, no significant difference was found in orthorexic behaviours according to nutrition knowledge levels. In this study, a negative correlation ($r = -0.117$, $p < 0.05$) was observed between GeSNK and ORTO-R scores (Table 7). Disson et al. [93] found that nutrition knowledge level was not associated with body satisfaction, while Schwartz et al. [94] studied females university students and concluded that females with more nutrition knowledge may be more prone to developing concerns about body shape/weight and eating disorder pathologies. In a systematic review, it was observed that with increased nutrition knowledge as a result of nutrition education, body image satisfaction and general satisfaction with physical appearance increased [95]. In the present study, a negative correlation ($r = -0.213$, $p < 0.05$) was found between BSQ-34 and GeSNK scores (Table 7).

Strengths and limitations

This study was conducted only with females between the ages of 18 and 60 years in Istanbul, which has the highest population density in Turkey. Due to the sample size and the demographic characteristics of the participants, the results cannot be generalized to the country as a whole.

Furthermore, the fact that the administered questionnaire was based on self-reporting may have introduced

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