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Relationship Between Adults' Disordered Eating Behaviors, Insomnia Complaints and Cognitive Failures

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ABSTRACT

Objective: The aim of this study is to assess the correlation between adults' disordered eating behaviors, insomnia complaints, and cognitive failures. In addition, a comparison was made regarding cognitive failures, disordered food, and insomnia based on gender and body mass index. **Materials and Methods:** We conducted this cross-sectional study with 364 adults aged 18 to 65 years. Participants completed an online questionnaire including general information, dietary habits, cognitive failures scale (CFQ), insomnia complaints and sleep quality basic scale (BaSIQS) and eating disorder assessment scale (EDE-Q-13). IBM SPSS (Statistical Package for Social Sciences) 25.0 package program was used to evaluate the data. **Results:** EDE-Q-13 total score was significantly positively correlated with BaSIQS and CFQ total score and its sub-dimensions ($p<0.05$). BaSIQS total score is significantly positively correlated with CFQ total score and its sub-dimensions ($p<0.05$). Men achieved a higher mean score on the EDE-Q-13 in comparison to women ($p<0.05$). General cognitive failures and concentration sub-dimension scores were higher in women ($p<0.05$) The general cognitive failure sub-dimension scores of underweight women were higher than those of normal body weight and slightly overweight-fat women ($p<0.05$). **Conclusion:** Disordered eating behavior has been associated with complaints of insomnia and cognitive failures in adults in the community. This study indicates the importance of targeting regular sleep patterns and preserving cognitive function in the avoidance of eating disorders. Regular sleep and participation in activities to improve cognitive function should be considered a healthy lifestyle approach alongside diet and physical activity for public health

Keywords: Eating Disorders, Cognitive Failures, Cognition, Insomnia, Sleep Quality.

Yetişkinlerin Bozulmuş Yeme Davranışları, Uykusuzluk Şikayetleri ve Bilişsel Başarısızlıkları Arasındaki İlişki

ÖZ

Amaç: Çalışma yetişkin bireylerin bozulmuş yeme davranışları ile günlük aktivitelerindeki bilişsel başarısızlıkları ve uykusuzluk şikayetleri arasındaki ilişkiyi değerlendirmek amacıyla yürütülmüştür. Ayrıca yeme, uyku ve bilişteki bozulmalar cinsiyet ve beden kütle indeksi sınıflamasına göre kıyaslanmıştır. **Gereç ve Yöntem:** Çalışma kesitsel tipte olup 18-65 yaş arası 364 yetişkin birey ile yürütülmüştür. Katılımcılar genel bilgiler, beslenme alışkanlıkları, bilişsel başarısızlıklar ölçeği (CFQ), uykusuzluk şikayetleri ve uyku kalitesi temel ölçeği (BaSIQS) ve yeme bozukluğu değerlendirme ölçeğini (EDE-Q-13) içeren online anket formunu doldurmuşlardır. Verilerin değerlendirilmesinde IBM SPSS (Statistical Package for Social Sciences) 25.0 paket programı kullanılmıştır. **Bulgular:** EDE-Q-13 toplam puanı, BaSIQS ve CFQ toplam puanı ve alt boyutları ile pozitif yönde anlamlı olarak ilişkilidir ($p<0.05$). BaSIQS toplam puanı, CFQ toplam puanı ve alt boyutları ile pozitif yönde anlamlı olarak ilişkilidir ($p<0.05$). EDE-Q-13 toplam puanı erkeklerde kadınlara kıyasla daha yüksektir ($p<0.05$). Genel bilişsel başarısızlıklar ve konsantrasyon alt boyut puanları kadınlarda daha yüksektir ($p<0.05$). Kadınlar arasında zayıf olanların genel bilişsel başarısızlıklar alt boyut puanları normal vücut ağırlığında olanlara ve hafif kilolu-şişman olanlara kıyasla daha yüksektir ($p<0.05$). **Sonuç:** Toplumdaki yetişkinlerde bozulmuş yeme davranışı uykusuzluk şikayetleri ve bilişsel başarısızlıklar ile ilişkili bulunmuştur. Bu çalışma yeme bozukluklarının önlenmesinde düzenli uyku düzenini ve bilişsel işlevi korumanın hedeflenmesinin önemine işaret etmektedir. Düzenli uyku ve bilişsel işlevi geliştirme faaliyetlerine katılım halk sağlığı açısından diyet ve fiziksel aktivitenin yanı sıra sağlıklı yaşam tarzı yaklaşımı olarak ele alınmalıdır.

Anahtar Kelimeler: Yeme Bozukluğu, Bilişsel Başarısızlıklar, Biliş, Uykusuzluk, Uyku Kalitesi.

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INTRODUCTION

Eating disorders include a set of persistent psychiatric conditions distinguished by the emergence of atypical eating patterns, distress over physical attributes, excessive preoccupation with body image, and an unhealthy preoccupation with weight regulation (Wu et al., 2020; Neumark-Sztainer et al., 2011). The incidence of eating disorders has escalated in developed and developing nations due to the processes of industrialization, urbanization, and globalization, although they are more prevalent in Western societies. (Makino et al., 2004; Pike et al., 2014). Due to the elevated risk of mortality, propensity for chronicity, and increased prevalence of eating disorders, a comprehensive evaluation of these conditions is necessary. (Smink et al., 2012). Most types of eating disorders impair sleep quality. It has been reported that plasma orexin concentrations may contribute to decreased sleep quality in restrictive and malnourished individuals (individuals with anorexia nervosa). (Sauchelli et al., 2016). A decrease in sleep quality due to high body mass index and sleep apnea has been reported in people with binge eating syndrome and night eating syndrome (Cho et al., 2020; Yeh and Brown, 2014). An increased likelihood of eating disorders has been linked to insomnia. Moreover, the treatment of eating disorders is adversely affected by insomnia (Allison et al., 2016). Sleep is considered an important regulator of neurobiological processes and memory (Feld and Born, 2020). People with insomnia often complain about problems with daytime functioning involving cognitive effort, including attention, memory, and focus (Wilkerson et al., 2012). These problems are related to the inability to successfully carry out routine responsibilities and are referred to as 'cognitive failures'. While cognitive failures are a common occurrence, certain individuals are more prone to committing these minor errors. The cognitive changes are often triggered by insomnia, stress, and anxiety, but can sometimes be diet-related (Barkus, 2015; Tuck et al., 2023). Nutrition may induce cognitive impairment through oxidative and inflammatory pathways (Baierle et al., 2015; Muñoz and Costa, 2013). It is worthwhile to conduct research to determine the risk of eating disorders in individuals living in the community. Eating disorders may be influenced by personality traits, emotional state and environmental factors (Bakalar et al., 2015). Additionally, there have been prior reports suggesting that eating disorders may originate from neurobiological mechanisms (Kaye et al., 2009). Increasing research to identify risk factors and associated conditions that contribute to eating disorder pathology helps efforts to prevent this disorder (Ciao et al., 2014). The relationships between sleep, cognition, and eating have been treated as binary in most studies. The principal objective of this investigation was to compile the relationships among these three conditions in a single study. Another aim was to compare the disorders in sleep, cognition, and eating according to gender and body mass index classification.

MATERIALS AND METHODS

Study type and sample

This was a cross-sectional study evaluating relationships among sleep, cognition, and eating behaviors of adults. Power analysis was conducted to determine the number of adults needed to be included in this study.Error margin, power, and effect size were set at 0.05, 0.95, and 0.5, respectively. It was found that at least 176 adults would be needed to participate in this study. However, in order to obtain more accurate results, a higher number of participants was reached and the study was completed with a survey of 364 adults.Volunteers aged 18 to 65 were eligible to participate in the research, while those who were pregnant or breastfeeding were excluded.

Data collection

The data for the study were gathered electronically via a hyperlinked survey that was distributed to the participants. The participants were administered the questionnaires via social media groups facilitated by renowned individuals. The participants who consented to take part in the research filled out the questionnaire. It comprised the following sections: general information, eating habits, the cognitive failure scale, complaints of insomnia, the sleep quality fundamental scale, and the eating disorder assessment scale. The initial page of the digital survey contained details pertaining to the research, accompanied by an area designated for the completion of the consent form. After reading this explanation and providing their consent via the consent form, the participants moved on to the section addressing the research questions and responded within a time frame of approximately 10 to 15 minutes.

Cognitive Failures Questionnaire (CFQ): Broadbent et al. (1982) devised this scale for the purpose of evaluating cognitive function. Eser et al. examined the validity and dependability of the scale in Turkey. The cumulative score derived from the 25 queries comprising the Likert-type scale with four points (0 = never, 1 = rarely, 2 = occasionally, 3 = often) is 75. General cognitive failures, inattention, concentration, names (memory), and social failings are its five sub-dimensions. An upward trend in scale score is indicative of cognitive functioning that is disordered. The Turkish version was documented to have a Cronbach's alpha coefficient of 0.91 (Eser et al., 2020).

The BaSIQS is the Basic Scale of Insomnia Complaints and Sleep Quality: The seven-item scale was created in 2015 by Allen Gomes et al. The Turkish investigation on the scale's validity and reliability was carried out by Mıhçıoğlu et al. (2021). The scale inquires of participants the following: the duration of time required to fall asleep, the frequency

of difficulties in initiating sleep, the frequency of nighttime awakenings, the predicament of waking up early in the morning or late at night, the subjective definition of sleep irrespective of its duration, and the quality of sleep experienced. It consists of two sub-dimensions: difficulty falling unconscious and difficulty waking up. The total score and sub-dimension scores are calculated by adding the scores of each item on a scale from zero to four. The range of possible total scores on the scale is from 0 to 28. The Cronbach's alpha coefficient of the scale was reported as 0.752 (Mıhçıoğlu et al., 2021).

Eating Disorder Evaluation Scale (EDE-Q-13): The instrument was designed for the evaluation of food disorders by Fairburn and Beglin in 1994. A study on the validity and reliability of Turkish data was undertaken by Esin and Ayyıldız in 2022. The scale exhibited a Cronbach's alpha value of 0.89, while the Cronbach's alpha values for the five sub-dimensions were computed in the range of 0,75-0,94. It consists of five sub-dimensions: restricted eating, concern about body shape and body weight, body dissatisfaction, binge eating, and purging. The scoring process is conducted using a seven-point Likert scale. A greater degree of eating-related psychopathology is indicated by a higher score (Esin & Ayyıldız, 2022).

Anthropometric Measurements: Participants' height and body weight were collected based on self-reports in an online questionnaire. Body mass index (BMI) values of individuals were calculated by dividing body weight in kilograms (kg) by the square of height in meters (m) (kg/m^2) according to the World Health Organization (WHO) assessment. BMI results were evaluated according to the WHO classification. According to this classification, BMI<18.5 is underweight, 18.5-24.9 is normal, 25-29.9 is overweight, and ≥30 kg/m^2 is obese (Zierle-Ghosh and Jan, 2018).

Statistical analysis

The program IBM SPSS 25.0 (Statistical Package for the Social Sciences) was utilized to analyze the data. For descriptive statistics, mean, standard deviation, number, and percentage values were utilized. In lieu of parametric approaches, table construction was undertaken due to the absence of a normal distribution in the data. The significance of the difference between the means of three or more groups was assessed using the Kruskal-Wallis test, while the difference between the means of two groups was evaluated using the Mann-Whitney U test. Using Spearman correlation analysis, the associations among the scale scores were ascertained. The level of significance was assessed at $p<0.05$.

Ethical considerations

Approval was obtained from the Health Sciences Ethics Committee of Çankırı Karatekin University (Date:19.03.2024, Approval no No:12). The research was performed in accordance with the principles of the Declaration of Helsinki.

RESULTS

Table 1 provides an overview of the participants' general characteristics. 29.40% of the individuals were men, and 70.60% were women. The rates of smoking and alcohol use among the participants were 24.18% and 20.88%, respectively. The rate of those who exercised regularly was 31.87%. The mean age of the individuals was 24.51±8.1 years, and the mean BMI was 23.1±3.7 kg/m^2. The eating habits of the participants are given in Table 2. 3.57% of individuals had one meal, 54.40% had two meals and 42.03% had three meals. The majority of participants (59.89%) skip their main meals. They frequently reported skipping breakfast (46.98%) and lunch (46.98%). 18.41% of the individuals had slow eating habits, 57.69% had moderate eating habits and 23.90% had fast eating habits.

Table 1. General characteristics of the participants (n=364).

	n	%*
Gender		
Male	107	29.40
Female	257	70.60
Smoking habit		
Yes	88	24.18
No	276	75.82
Alcohol Use		
Yes	76	20.88
No	288	79.12
Exercise regularly		
Yes	116	31.87
No	248	68.13
Total	**364**	**100.0**
Age (years)(mean±standard deviation)		24.51±8.1
BMI (mean± standard deviation)		23.1±3.7

*Column percentage.

Table 3 presents a comparison of the scale ratings of the participants according to their body mass index classification and gender. EDE-Q-13 total score and sub-dimension scores (restricted eating, concern about body shape and body weight, body dissatisfaction, binge eating) significantly differed according to women's BMI classification (p<0.001). Overweight and obese women had higher mean values for these scores. In the overweight and obese group, both the total score and the restricted eating sub-dimension score for men were substantially higher (p0.05). For both genders, complaints of insomnia and the total score and sub-dimension scores (problems falling asleep, problems waking up) of the sleep quality baseline scale did not differ according to BMI classification (p>0.05). There was no significant difference in the total score of the cognitive failure scale based on BMI classification in both genders (p>0.05). The general cognitive failure sub-dimension score was significantly higher among underweight women (p=0.011). The social failure sub-dimension score was significantly higher among men who exhibited a healthy body weight (p=0.027). When examining restricted eating and body dissatisfaction scores across genders, it was found that women had substantially higher scores (p<0.05). EDE-Q-13 total score and other sub-dimensions (concerns about body shape and body weight, binge eating, purging) were higher in men (p<0.05). Women had higher sub-dimension scores on general cognitive failures and concentration than males (p<0.05).

Table 4 presents the correlations that exist between the total scores and sub-dimension scores of the instruments. The EDE-Q-13 total score was significantly positively correlated with the insomnia complaints and the sleep quality core scale (BaSIQS) and the cognitive failures scale (CFQ) total score and its sub-dimensions (p<0.05). Significant positive correlations exist between insomnia complaints and the sleep quality core scale (BaSIQS) and the total score and sub-dimensions of the cognitive failure scale (CFQ) (p<0.05).

Table 2. Participants' Eating Habits (n=364).

	Mean ± standard deviation	
Number of main meals	2.38±0.5	
Number of snacks	1.76±0.9	
	n	**%***
Number of main meals		
1	13	3.57
2	198	54.40
3	153	42.03
Skipping main meals		
Yes	218	59.89
No	146	40.11
The main meal that is skipped most often (n=218)		
Morning	116	53.21
Afternoon	95	43.58
Evening	7	3.21
The speed of eating		
Slow	67	18.41
Middle	210	57.69
Fast	87	23.90
Total	**364**	**100.0**

*Column percentage.

Table 3. Comparison of scale scores for individuals according to gender and body mass index classification (n=364).

	Female				Male				p^1	p^2	p^3
	Underweight n=25	**Normal n=172**	**Overweight and fat n=60**	**Total n=257**	**Underweight n=4**	**Normal n=52**	**Overweight and fat n=51**	**Total n=107**			
EDE-Q-13 total	0.94±1.1	1.19±1.1	2.05±1.0	1.37±1.1	0.59±0.4	1.27±1.2	1.58±1.0	1.39±1.1	**p<0.001**	**0.038**	**p<0.001**
Sub-dimensions of EDE-Q-13											
Restricted eating	0.70±1.2	1.39±1.5	2.16±1.8	1.50±1.6	0.0±0.0	1.46±1.6	1.64±1.3	1.49±1.5	**p<0.001**	**0.026**	**p<0.001**
Concern about body image and body weight	1.58±2.0	1.48±1.6	2.62±2.0	1.76±1.8	1.50±1.2	1.57±1.6	1.99±1.6	1.77±1.6	**p<0.001**	0.397	**p<0.001**
Body dissatisfaction	1.52±1.9	1.95±2.0	3.59±2.0	2.29±2.1	1.37±1.2	1.71±1.7	2.45±1.9	2.05±1.8	**p<0.001**	0.086	**p<0.001**
Binge eating	0.96±1.38	0.99±1.2	1.73±1.4	1.16±1.3	0.58±0.5	1.09±1.4	1.41±1.2	1.22±1.3	**P<0.001**	0.228	**p<0.001**
Detox	0.34±0.6	0.49±1.0	0.88±1.4	0.57±1.1	0.08±0.1	0.78±1.3	0.84±1.2	0.78±1.2	0.057	0.457	**0.017**
BaSIQS total score	12.76±5.0	11.93±3.5	11.65±3.8	11.94±3.7	13.75±0.5	11.86±4.0	11.96±4.5	11.98±4.2	0.528	0.376	0.288
BaSIQS sub-dimensions											
Difficulties falling asleep	8.04±3.8	7.20±2.9	6.51±2.5	7.12±2.9	9.75±2.0	7.19±3.0	7.0±3.3	7.19±3.2	0.141	0.202	0.056
Waking up problems	4.72±2.0	4.72±2.1	5.13±2.1	4.81±2.1	4.0±2.4	4.67±2.0	4.96±1.9	4.78±2.0	0.329	0.495	0.186
CFQ total score	36.24±13.3	29.29±10.8	30.95±10.6	30.35±11.2	24.75±8.0	27.67±13.1	27.31±8.9	27.39±11.0	0.059	0.874	0.078
Scores of CFQ sub-dimensions											
General cognitive failure	15.76±5.3	12.40±4.5	12.60±5.0	12.77±4.8	11.25±2.8	11.32±5.4	11.25±4.1	11.28±4.7	**0.011**	0.852	**0.011**
Carelessness	5.40±3.6	4.50±2.7	4.88±2.2	4.68±2.7	3.50±1.2	4.05±2.9	3.64±2.6	3.84±2.7	0.375	0.783	0.733
Concentration	10.32±3.4	8.49±3.1	9.03±2.9	8.79±3.1	8.50±5.0	8.19±3.7	8.07±2.7	8.14±3.3	0.059	0.749	**0.046**
Names	3.0±1.6	2.52±1.6	2.90±1.76	2.66±1.6	1.50±0.5	2.44±1.5	2.84±1.7	2.59±1.6	0.204	0.176	0.172
Social failure	1.76±1.6	1.36±1.3	1.53±1.5	1.43±1.4	0.0±0.0	1.65±1.5	1.49±1.3	1.51±1.4	0.577	**0.027**	0.908

p^1Analysis of the difference between scale scores according to the BMI classification of women, **p^2**Analysis of the difference between scale scores according to the BMI classification of men, **p^3**Analysis of the difference between scale scores according to gender BaSIQS: Insomnia Complaints and Sleep Quality Basic Scale, CFQ: Cognitive Failures Scale, EDE-Q-13: Eating Disorder Rating Scale, were analyzed with the Kruskal Wallis Test (p^1 and p^2) and Mann Whitney U Test (p^3).

Table 4. Correlations between the total scores and sub-dimension scores of the scales (n=364).

Variables	2. BaSIQS total score	2a. Difficulties falling asleep	2b. Waking up problems	**3. CFQ total score**	3a. General cognitive failure	3b. Carelessness	3c. Concentration	3d. Names	3e. Social failure
1. **EDE-Q-13 total score**	0.189**	0.155**	0.126*	0.307**	0.215**	0.340**	0.230**	0.190**	0.317**
1a. Restricted eating	0.088	0.065	0.074	0.168**	0.083	0.211**	0.110*	0.138**	0.235**
1b. Concern about body image and body weight	0.155**	0.155**	0.072	0.250**	0.189**	0.262**	0.215**	0.140**	0.197**
1c. Body dissatisfaction	0.178**	0.187**	0.051	0.326**	0.237**	0.315**	0.293**	0.213**	0.200**
1d. Binge eating	0.199**	0.142**	0.157**	0.287**	0.218**	0.332**	0.161**	0.185**	0.374**
1e. Detox	0.144**	0.056	0.185**	0.144**	0.086	0.241**	0.017	0.057	0.367**
2. BaSIQS total score				0.305**	0.302**	0.215**	0.199**	0.128**	0.239**
2a. Difficulties falling asleep				0.348**	0.342**	0.252**	0.262**	0.118**	0.213**
2b. Waking up problems				0.075	0.081	0.022	0.026	0.069	0.132*

*p<0.05, **p<0.01, BaSIQS: Insomnia Complaints and Sleep Quality Core Scale, CFQ: Cognitive Failures Scale, EDE-Q-13: Eating Disorder Rating Scale, Spearman correlation analysis was used.

DISCUSSION

Studies on eating disorders are generally conducted in high-risk groups (women, young people). In our study, eating disorders of adults in the community were evaluated through EDE-Q-13 (score; women: 1.37±1.1; men: 1.39±1.1) and higher scores were reported in previous studies conducted in adults (Zohar et al., 2023; Kübra and Ayyıldız, 2022). The differences may be explained by socio-cultural factors and social media exposures that emphasize body image more (Hoek, 2016; Holland & Tiggemann, 2016). In our study, men had higher eating disorder assessment scale scores. The existing body of literature suggests that there is a biological underpinning to the higher incidence of eating disorders among women. It has been reported that the testosterone hormone has protective effects that reduce eating pathology in men, and estrodiol increases eating pathology in women by mediating neural responses to tasteless foods (Culbert et al., 2021). A number of studies have reported in recent years that the prevalence of eating disorders is comparable to that of women and that muscle-focused eating disorder has increased significantly among males. (Murray et al., 2017; Sahlan et al., 2020). In our study, women had higher scores for body dissatisfaction and restricted eating. Increasing sociocultural pressures on women may be making them more inclined to restrictive eating to achieve the slim profile idealized by the media (Hesse-Biber et al., 2006). Examining socio-cultural and media influences is beyond the scope of this study, but is recommended for consideration in future research.

Cognitive failures are minor errors in thinking related to perception, memory, and concentration that are reported throughout daily life. They are more common in clinical cases (dementia and psychological disorders) but can also occur in healthy individuals (Carrigan & Barkus, 2016). In our study, we found that adults' cognitive failures differed between genders. Concentration deficits and general cognitive failures were more prevalent among women than males. Gender differences in cognitive impairments were consistent with the literature and may be due to hormones, genetics, and lifestyle factors (Au et al., 2017; Levine et al., 2021). In our study, cognitive failures were associated with complaints of insomnia. Insomnia is an important public health problem affecting large segments of society, and experimental studies have shown that a variety of cognitive functions can be impaired in healthy individuals by insomnia (Lim and Dinges, 2010; Reynolds and Banks, 2010). Cognitive failures are also associated with disordered eating behaviors. Cognition involves a variety of mental processes (e.g., perception, memory, learning, attention, decision-making, and language abilities), and executive functions, particularly those involving the control of behavior, have previously been reported to be implicated in the emergence of eating disorders by modulating hedonic processes in food intake (Miranda-Olivos et al., 2021; Ziauddeen et al., 2015).

We identified a correlation between complaints of insomnia and compromised dietary behavior in our research. Insomnia affects various hormone levels (leptin, ghrelin, cortisol, insulin, and melatonin) that regulate appetite. Changes in the levels of these hormones may also affect mood (depression, stress, and anxiety) and contribute to nutritional imbalances (Bernardi et al., 2009). Those with insomnia are more inclined to have disordered eating behaviors such as skipping breakfast, snacking late at night, replacing meals with snacks, irregular meal times, and consuming a calorie-rich diet (Kandeğer et al., 2021). A number of studies, consistent with our findings, have found a correlation between inadequate sleep and an increased risk of eating disorders (Allison et al., 2016; Christensen and Short, 2021).

Body mass index is a useful guide in the assessment of obesity, metabolic abnormalities, and complex diseases (Bray, 2023). Women who were underweight according to body mass index had higher overall cognitive failure scores. In previous studies, changes in body weight, especially obesity, have been reported to negatively affect brain structure and cognitive function (Prickett et al., 2015; Bashir et al., 2022). Underweight is a consequence of malnutrition, and normal cognitive functions require access to good and safe nutrition (Pizzol et al., 2021). Adequate intake of energy, macronutrients, and micronutrients and maintaining a healthy lifestyle are important for cognitive functions (Puri et al., 2023). In our study, body mass index was not found to be associated with insomnia complaints in both genders. Previous studies have reported that sleep quality decreased in those with a high body mass index (Gupta et al., 2022; Wang et al., 2019). In this study, overweight and obese individuals had higher eating disorder scores. Obese individuals experience body dissatisfaction and may resort to risky dieting practices to manage their body weight. They are therefore more likely to havee eating disorders (Jebeile et al., 2021).

Limitations and Strentghs

One of this study's advantages is that it was carried out using a sizable sample of adult healthy individuals; nonetheless, there are several restrictions. Cognitive performance, eating, and sleep disorders were assessed using easy-to-use and time-efficient scales. However, the use of self-reported measurement methods may have biased the results. The use of objective methods will provide more valid results. Young adults and women comprised the majority of participants, limiting the generalization of the findings. Another limitation of the study is that mediating factors such as mood were not investigated in the relationships between eating, sleep, and cognition. Future studies should test these relationships with different and more representative groups of participants, taking into account mediating factors.

CONCLUSION

As a result, it was determined that disordered eating behavior was correlated with insomnia complaints and cognitive failures in adults in the community. Efficient policies must be established to identify individuals with eating disorders in workplaces and schools and to guarantee timely access to treatment, in light of the rise in disordered eating behaviors, particularly in Western societies. This study emphasizes the importance of targeting insomnia and preserving cognitive function as preventative measures against eating disorders. Regular sleep and participation in activities to improve cognitive function should be considered a healthy lifestyle approach alongside diet and physical activity for public health.

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Conflict of Interest

The author declare no potential conflicts of interest with respect to the research, authorship and/or publication of this article.

Author Contributions

Plan, design: GH, FT; **Material, methods and data collection:** GH, FT; **Data analysis and comments:** GH, FT; **Writing and corrections:** GH, FT.

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Ethical Approval

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