HEALTH PSYCHOLOGY REPORT · 2026
ORIGINAL ARTICLE

Divna Blažev 1 · A,F
Mirta Blažev 1 · B,C
Anita Lauri Korajlija 2 · D,E

Perceived appearance-related sociocultural pressures and internalization of body ideals: a study on symptoms of eating disorders and orthorexia nervosa in young women

BACKGROUND
Sociocultural pressures can influence perceptions of physical appearance ideals, often driving the internalization of unrealistic standards, which can contribute to eating disorders (ED). Today, there is a strong focus on health ideals, promoting personal responsibility for leading a healthier lifestyle. For some, this pursuit can escalate into disordered eating behaviours or orthorexia nervosa (ON), an obsessive focus on consuming only "healthy" foods. This study explored the impact of appearance-related sociocultural pressures on symptoms of ED and ON, focusing on the role of internalizing thin and muscular body ideals. It also investigated whether this internalization mediates the association between sociocultural pressures and these symptoms.

PARTICIPANTS AND PROCEDURE
The study surveyed 1,318 young women aged 18-21 from Croatia, who completed online assessments measuring appearance-related sociocultural pressures and internalization (thin/muscular) body ideals (SATAQ-4), eating disorder (EAT-11 – revised EAT-26) and orthorexia symptoms (DOS) using a cross-sectional design.

RESULTS
The results show that sociocultural pressures significantly contribute to the severity of ED and ON symptoms. Thinness ideals are a central factor driving both ED and ON symptoms, whereas muscularity ideals are more specifically associated with ON. Sociocultural pressures exert their influence on ED and ON indirectly through the internalization of thinness ideals. However, while muscularity ideals did not mediate the relationship between sociocultural pressures and ED symptoms, they did mediate the effects on ON symptoms.

CONCLUSIONS
The findings highlight the critical role of sociocultural pressures and the internalization of thinness and muscularity ideals in the development of disordered eating behaviours. Interventions could therefore focus on educating young women and their social circles on the impact of sociocultural influences, promoting a supportive environment to challenge harmful norms.

KEY WORDS
sociocultural pressures; appearance ideals; body image; disordered eating; orthorexia nervosa

ORGANIZATION – 1: Institute of Social Sciences Ivo Pilar, Zagreb, Croatia · 2: Faculty of Humanities and Social Sciences, University of Zagreb, Zagreb, Croatia

AUTHORS' CONTRIBUTIONS – A: Study design · B: Data collection · C: Statistical analysis · D: Data interpretation · E: Manuscript preparation · F: Literature search · G: Funds collection

CORRESPONDING AUTHOR – Divna Blažev, Ph.D., Institute of Social Sciences Ivo Pilar, Trg Marka Marulića 19, 10000 Zagreb, Croatia, e-mail: blazev.divna@gmail.com

TO CITE THIS ARTICLE – Blažev, D., Blažev, M., & Lauri Korajlija, A. (2026). Perceived appearance-related sociocultural pressures and internalization of body ideals: a study on symptoms of eating disorders and orthorexia nervosa in young women. *Health Psychology Report*. https://doi.org/10.5114/hpr/220368

RECEIVED 03.07.2025 · REVIEWED 02.01.2026 · ACCEPTED 07.04.2026 · ONLINE PUBLICATION 08.06.2026

BACKGROUND

The social environment consists of three key influences: family, peers, and media, as outlined in the tripartite influence model (Thompson et al., 1999). These factors shape and reinforce appearance ideals, such as thinness for women and muscularity for men, placing pressure on individuals to conform. With repeated exposure, such appearance-related messages may become deeply internalized and adopted as personal standards of attractiveness and beauty. Over time, these standards are experienced as self-driven beliefs rather than external expectations. The perceived sociocultural pressure to attain these ideals, together with their internalization, has been linked to maladaptive eating-related outcomes, including eating disorder symptomatology (Bi et al., 2024) and orthorexia (Tóth-Király et al., 2021).

To contextualize these outcomes, it is important to distinguish between normative eating, eating disorders, and eating disorder symptoms. Normative eating involves a flexible and balanced dietary intake that meets nutritional needs while allowing adaptability in food choices (Franzini Pereira & Alvarenga, 2007). Eating disorders are clinically diagnosed conditions (anorexia nervosa, bulimia nervosa, binge eating disorder) characterized by persistent disturbances in eating behaviour, maladaptive weight-control practices, and dysfunctional attitudes toward food and body weight. In contrast, eating disorder symptoms are problematic eating behaviours, such as restriction, binge eating, or compensatory behaviours, that are less severe or frequent and do not meet the full diagnostic criteria (Franzini Pereira & Alvarenga, 2007). Accordingly, while all individuals with eating disorders exhibit eating disorder symptoms, not all individuals with such symptoms meet the criteria for a clinical diagnosis. In the present study, the terms eating disorders and eating disorder symptoms encompass both diagnosed eating disorders and symptomatology characteristic of these conditions.

Orthorexia represents a more complex and contested construct within this framework. Orthorexia was originally described as an obsessive focus on consuming foods perceived as healthy or "pure" (Bratman, 1997). Although it often begins as a well-intentioned pursuit of healthy eating, orthorexic tendencies may escalate into rigid dietary rules, moralization of food choices, distress following dietary transgressions, and significant interference with psychological, social, or physical functioning. Despite growing empirical interest, orthorexia nervosa is not currently recognized as a formal diagnosis in major classification systems such as the DSM-5 or ICD-11, and no consensus exists regarding its definition, measurement, or classification. To address this, Donini et al. (2022) proposed preliminary diagnostic criteria for orthorexia nervosa (ON), characterized by an obsessive focus on healthy eating that leads to emotional distress, guilt from dietary lapses, and risks to mental or physical health. ON often co-occurs with or progresses from other eating disorders, particularly among individuals with chronic conditions who seek greater control through rigid food rules. Some researchers argue that current evidence does not support its classification as a distinct eating disorder, highlighting its conceptual overlap with established eating disorder symptomatology and variability in definitions and measurement (Atchison & Zickgraf, 2022). In contrast, other authors conceptualize orthorexia as a separate construct, distinguished by an obsessive focus on the quality rather than the quantity of food intake, which characterizes traditional eating disorders (Fidan et al., 2010). This distinction suggests that orthorexia and eating disorders represent related but non-identical constructs.

To understand the relationship between orthorexia and societal pressures from family, peers, and media, it is necessary to consider the current societal context, often referred to as the "orthorexic society" (Nicolosi, 2006). This societal context puts a strong focus on the ideal of health, promoting the notion that individuals are personally responsible for maintaining their well-being, particularly through "healthy" eating habits. The concept of healthism (Crawford, 1980) describes this growing preoccupation with personal health, where a healthy lifestyle is not only linked to physical and psychological well-being but also viewed as a moral obligation. Within this sociocultural context, orthorexia emerges as an extreme manifestation of health-conscious behaviours, driven by the belief that physical health reflects moral virtue and self-discipline (Gimlin, 2002). In this framework, food choices become symbolic; eating exclusively "healthy" foods is not just about nutrition but also a response to societal pressures that equate health with morality and bodily appearance with personal worth. In other words, these sociocultural pressures from family, peers, and media toward healthy lifestyle can lead to the development of a rigid preoccupation with eating "clean" foods and avoiding those perceived as "unhealthy", i.e. orthorexia.

Sociocultural family pressure plays a crucial role in shaping eating habits and can contribute to the development of disordered eating behaviours (Alfoukha et al., 2017; Fortesa & Ajete, 2014; Makki et al., 2023; Quiles Marcos et al., 2013). In a qualitative study by White et al. (2021), participants reported feeling pressured by their parents to change their eating habits and lose weight. Some noted that their parents were highly preoccupied with their own body shape and weight, which, in turn, heightened their own body awareness. Parental encouragement to diet and lose weight has been specifically linked to disordered eating in daughters (Barakat et al., 2023). Similarly, parental influence has been identified as a signifi-

cant factor in the development of orthorexia nervosa tendencies (Bratman & Knight, 2000; Cheshire et al., 2020). Exposure to extreme attitudes and behaviours regarding diet and exercise during childhood and adolescence may contribute to orthorexia nervosa. In essence, a family environment that places a strong emphasis on weight, body shape, and nutritional awareness, where family members model a heightened concern for diet quality and food choices, may encourage similar preoccupations in youth (Cheshire et al., 2020).

Adolescent peer groups often exhibit similar eating patterns, with young women frequently conforming to social norms by mirroring the eating behaviours of their friends (Bruening et al., 2012; Gilmour et al., 2020). Research has shown that discussing dieting with peers is among the most significant factors contributing to thinness awareness, the internalization of thinness ideals, and social comparison. These factors, in turn, can lead to body dissatisfaction, a heightened desire for thinness, and disordered eating behaviours (Goodman, 2011). Peer pressure plays a crucial role in shaping eating behaviours and body image concerns (Alfoukha et al., 2017; Quiles Marcos et al., 2013). This is particularly concerning as both peer and media influences strongly impact young girls' perceptions of ideal body weight and eating habits (Mehmood et al., 2023).

Research suggests that girls experience greater pressure from the media to achieve a certain body type than from peers or family (Alfoukha et al., 2017; Dane & Bhatia, 2023; Tóth-Király et al., 2021). The media's influence on body image is a critical area of study within the broader context of sociocultural pressures, as research has established an association between media exposure and the internalization of socially constructed body ideals, particularly the unconscious adoption of the thinness ideal (Williams et al., 2003). Media not only promote the desire to lose weight but also reinforces orthorexic tendencies by glorifying extreme health-conscious behaviours (Haddad et al., 2019; Kovan & Yıldırım, 2025). Moreover, a higher degree of internalization of media-driven body standards is associated with increased susceptibility to orthorexia (Bi et al., 2024). The widespread acceptance and adoption of the Western thinness ideal, combined with the escalating societal pressure to maintain an ultra-healthy lifestyle, may contribute to the rise of orthorexia in contemporary culture.

In summary, family, peer, and media pressures play a significant role in shaping individuals' perceptions of diet and body image (Almutairi et al., 2023), often leading to the internalization of unrealistic standards. This internalization can contribute to disordered eating patterns and an obsessive focus on "clean" eating. Together, these influences may create a cycle where external expectations are adopted, reinforcing unhealthy eating behaviours and preoccupations with food purity. Our study aimed to investigate the direct impact of perceived sociocultural pressures on symptoms of eating disorders and orthorexia nervosa. By examining how family, peer, and media pressures shape eating behaviours, we highlight their role in individuals' relationships with food. Additionally, we explored how the internalization of thin and muscular body ideals acts as a key psychological mechanism driving disordered eating. Understanding the mediating role of these internalized ideals provides valuable insight into how sociocultural pressures not only influence eating disorders directly but also increase their severity.

Therefore, our study had three aims: first, to examine the direct effects of perceived family, peer, and media pressures related to appearance on eating disorder and orthorexia nervosa symptoms; secondly, to explore the relationship between the internalization of thin and muscular body ideals and eating disorder and orthorexia nervosa symptoms; and thirdly, to determine whether internalized body ideals mediate the relationship between sociocultural pressures and eating disorder and orthorexia symptoms.

PARTICIPANTS AND PROCEDURE

PARTICIPANTS

Participants were 1318 women aged 18 to 21 years (M = 19.78, SD = 1.12) from Croatia. The sample was non-probabilistic and convenient and was recruited online using a snowball sampling method. Participants originated from all counties of the Republic of Croatia, with the largest proportion residing in the capital, the City of Zagreb (21.1%), and Zagreb County (10.0%). The remaining participants were distributed across other Croatian regions, including Slavonia, Central Croatia, Istria, Kvarner, Dalmatia, and Lika, ensuring representation from all geographical regions of the country. Most participants had completed four-year secondary education, including gymnasiums (82.7%), while 8.5% had completed undergraduate university studies. A smaller proportion had completed primary education only (3.1%). All participants met the inclusion criteria of being female and between 18 and 21 years of age.

MEASURES

The Eating Attitudes Test (EAT-26; Garner et al., 1982) is a widely used screening tool for identifying symptoms of eating disorders in non-clinical populations. It consists of 26 items (e.g., "I feel extremely guilty after eating") divided into three subscales: dieting, bulimia and food preoccupation, and oral control.

Participants respond to these items indicating the frequency of certain behaviours on a six-point Likert scale, ranging from *always* to *never*. Items are scored with three points for *always*, two points for *usually*, one point for *often*, and zero points for *sometimes*, *rarely*, and *never*. The total score is calculated as a sum of these responses, ranging from 0 to 78, with higher scores indicating more severe eating disorder symptoms. The EAT-26 has been used in Croatia for over two decades and was formally validated in a Croatian sample by Ambrosi-Randić and Pokrajac-Bulian (2005). Despite its widespread use, studies have documented persistent structural inconsistencies of the EAT-26 across samples and cultures, with poor replication of the original three-factor structure and frequent cross-loadings or non-loading items (Doninger et al., 2005; Ocker et al., 2007). These issues have also been reported in Croatian samples (Ambrosi-Randić & Pokrajac-Bulian, 2005). In the present study, confirmatory factor analysis indicated that the original 26-item three-factor solution demonstrated poor model fit in a sample of late-adolescent women. Consistent with previous empirical findings and guided by both theoretical considerations and modification indices, alternative factor structures previously proposed in the literature were systematically tested. As neither the original three-factor model nor previously proposed four-factor solutions demonstrated satisfactory psychometric properties, a refined four-factor solution consisting of 11 items was derived and retained (EAT-11) (for more, see Blažev, 2023). The final model comprised four factors – dieting (items 1, 11 and 14), food preoccupation (items 3, 18 and 21), bulimia (items 9 and 25), and oral control (items 7, 16 and 17) – loading onto a general second-order latent factor reflecting disordered eating symptomatology. This structure demonstrated very good model fit, and internal consistency was high for the total scale (α = .84) and acceptable to good for all subscales (α = .67-.88). Total scores were calculated analogously to the original scoring procedure, with higher scores indicating more pronounced eating disorder symptoms (see Blažev, 2023 for details). The retained items capture core dimensions of disordered eating, including restrictive dieting, cognitive and behavioural preoccupation with food, compensatory behaviours, and perceived control overeating. This version was used in all subsequent analyses.

The Düsseldorf Orthorexia Scale (DOS; Barthels et al., 2015) measures orthorexic eating behaviours by capturing maladaptive cognitions, emotional reactions, rigid dietary rules, and behavioural and social consequences related to an excessive preoccupation with healthy eating. The scale consists of 10 items assessing, among other aspects, the prioritization of healthy eating over enjoyment ("Eating healthy food is more important to me than indulgence"), strict adherence to personal dietary rules ("I have certain nutrition rules that I adhere to"), persistent cognitive preoccupation with healthy nutrition ("My thoughts constantly revolve around healthy nutrition and I organize my day around it"), negative emotional responses following perceived dietary transgressions ("If I eat something I consider unhealthy, I feel really bad"), and social impairment associated with rigid eating behaviours (avoidance of social eating situations and feelings of social exclusion). Participants rate their agreement with each item on a four-point Likert scale ranging from 1 (*it does not correspond to my behaviour at all*) to 4 (*it corresponds well to my behaviour*). The total score is calculated as a sum of all items and ranges from 10 to 40, with higher scores reflecting more severe symptoms of orthorexia nervosa. The psychometric characteristics of the scale have been validated in various samples (Aloi et al., 2023; Rogoza et al., 2021). In this study, the DOS also demonstrated high internal reliability, with a Cronbach's α coefficient of .87.

The Sociocultural Attitudes Towards Appearance Questionnaire-4 (SATAQ-4; Schaefer et al., 2015) measures societal and interpersonal aspects of appearance ideals. The SATAQ-4 was selected as it formed part of a larger doctoral research project and was subjected to extensive psychometric evaluation in the present sample prior to hypothesis testing. The questionnaire includes two subscales measuring internalization of appearance ideals: Internalization: Thin/Low Body Fat ("I want my body to look very thin") and Internalization: Muscularity/Athletic ("I think a lot about looking muscular"), and three subscales assessing perceived appearance-related pressures from family, peers, and media ("I feel pressure from my family/peers/media to improve my appearance"). Each subscale related to internalization contains five items, while the pressure subscales each have four items. Participants rate their agreement on a 5-point Likert scale ranging from 1 (*definitely disagree*) to 5 (*definitely agree*). Total score is calculated as an average of responses and ranges from 1 to 5 for subscales measuring internalization or 1 to 4 for subscales measuring pressures. Higher scores indicate higher internalization of the thin/muscular ideal and more pronounced perceived appearance-related family, peer, and media pressures. Confirmatory factor analysis conducted as part of the doctoral research confirmed the expected five-factor structure of the SATAQ-4 in the present sample, with excellent model fit indices (Blažev, 2023). The questionnaire has demonstrated satisfactory psychometric properties across samples from the USA, Italy, England, Australia (Schaefer et al., 2015), and Croatia (Stojcic et al., 2020; Blažev, 2023). In our study, the internal consistency, measured with Cronbach's alpha, was .80 and .88 for the internalization of thin and muscular ideals, and .84, .90, and .94 for pressure from family members, peers, and media.

PROCEDURE

The study was approved by the Ethics Committee of the Department of Psychology of the Faculty of Humanities and Social Sciences at the University of Zagreb. Data were collected online between April 21 and May 20, 2021, using the LimeSurvey platform. Participants were recruited exclusively online. The questionnaire link was disseminated through social networking sites (e.g., Facebook and Instagram), including paid advertisements targeted at women aged 18 to 21 years, as well as through Facebook groups used by high school students and university students for academic communication. In addition, the link was distributed via email to secondary schools, gymnasiums, and universities through personal contacts within these institutions. Participants were further encouraged to share the questionnaire link with peers who met the inclusion criteria.

Participation was voluntary. As an incentive, participants were offered the option to enter a prize raffle, which included shopping vouchers for a drugstore (one voucher worth approximately €33, one worth €20, one worth €13, and five vouchers worth approximately €7). To participate in the raffle, respondents provided an email address; these addresses were used solely for prize notification and were deleted immediately afterward. No personal data were collected from participants who did not opt into the raffle. At the beginning of the questionnaire, participants received detailed information about the study purpose, confidentiality, anonymity, and their right to withdraw at any time, and they provided informed consent electronically. Participants also confirmed that they met the age eligibility criteria. Completion of the questionnaire took approximately 30-40 minutes.

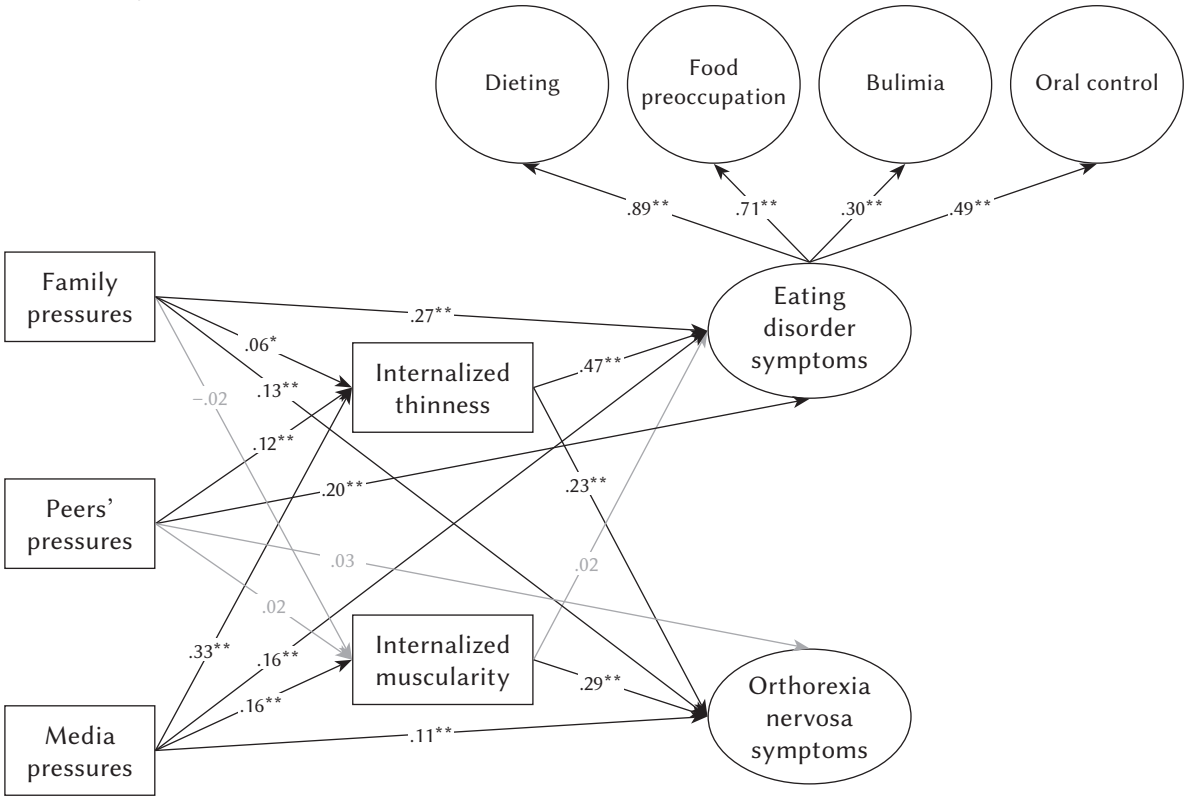
In line with ethical guidelines, contact information for the Eating Disorders Centre, a specialized outpatient centre in Croatia providing psychological counselling and treatment for eating disorders, was provided at the end of the questionnaire in case participation elicited distress. Participants were also given the option to contact the researcher via email for additional information about the study.

DATA ANALYSIS

To examine the relationship between perceived appearance-related sociocultural pressures, the internalization of appearance ideals, and symptoms of eating disorders and orthorexia nervosa symptoms, we applied structural equation modelling using the maximum likelihood estimation with robust stan-

Figure 1

Illustration of the tested model



Note. Indicators of latent variables and correlations between variables, as well as error terms and residuals, are omitted from the figure to ensure clarity; $^{*}p < .05$, $^{**}p < .01$.

dard errors (MLR) estimator and the full information maximum likelihood (FIML) method for handling missing values.

The tested model examines perceived appearance-related pressures from family, peers, and media as exogenous variables; internalization of thin and muscularity body ideals as mediators; and eating disorder and orthorexia nervosa symptoms as endogenous variables (Figure 1). We evaluated the model data fit of this parallel mediation model, where the internalization of thin and muscularity body ideals mediates the relationship between perceived appearance-related sociocultural pressures and symptoms of eating disorders and orthorexia nervosa.

To evaluate the model-data fit, we adopted Hu and Bentler's (1999) criteria and examined both absolute and incremental fit indices. The absolute fit indices included the chi-square test of model fit (χ^2), the ratio of chi-square to degrees of freedom (χ^2/df), the root mean square error of approximation (RMSEA) along with its 90% confidence interval (CI), the *p*-value for the test of close fit (*p*-close), and the standardized root mean square residual (SRMR). The incremental fit indices included the comparative fit index (CFI) and the Tucker-Lewis index (TLI).

For the model's direct and indirect effects, standardized regression coefficients are reported, accompanied by 95% confidence intervals. Additionally, Table S1 (see Supplementary materials) presents intercorrelations between the variables in the model, using Pearson's *r* coefficients

RESULTS

DESCRIPTIVE STATISTICS

Table 1 presents the descriptive statistics for the variables included in the model: eating disorder and orthorexia nervosa symptoms, as well as perceived appearance-related sociocultural pressures. Additionally, the results of the Shapiro-Wilk test for normality are reported.

On average, young women reported low levels of eating disorder symptoms (M = 3.92) and orthorexia nervosa symptoms (M = 18.67), suggesting less pronounced symptoms. Regarding perceived appearance-related sociocultural pressures, participants indicated below-average perceived family (M = 6.44) and peer pressures (M = 5.96), but slightly above-average perceived media pressure (M = 10.09). This suggests that young women in this sample experience minimal family and peer influences but perceive somewhat elevated pressure from media to conform to societal appearance ideals. Similarly, the internalization of thin (M = 10.70) and muscularity (M = 9.10) ideals was below average, indicating limited adoption of societal expectations for achieving thin or muscular body ideals.

The Shapiro-Wilk test revealed significant deviations from normal distribution for all research variables ($p < .001$), indicating that the assumption of univariate normality required for structural equation modelling (SEM) was not met. However, these deviations were mild and unlikely to impact SEM results significantly, as skewness and kurtosis values were within acceptable thresholds (skewness < 3, kurtosis < 10), as recommended by Kline (2011).

STRUCTURAL EQUATION MODELLING: THE PARALLEL MEDIATION MODEL

The results from structural equation modelling indicate that the tested parallel mediation model (Figure 1), in which the internalization of thin and muscularity body ideals mediates the relationship between perceived appearance-related sociocultural pressures and symptoms of eating disorders and orthorexia nervosa, demonstrates an acceptable fit across most goodness-of-fit indices: $\chi^2(276) = 1193.4$; $p < .001$;

Table 1

Descriptive statistics of variables in the model and Shapiro-Wilk test of normality (N = 1318)

Variables	*M*	*SD*	Min	Max	TS	Skew	Kurt	S-W
Eating disorder symptoms	3.92	5.18	0	31	0-33	1.66	2.68	0.77*
Orthorexia nervosa symptoms	18.67	5.30	10	39	10-40	0.44	−0.01	0.97*
Family pressures	6.44	3.03	4	16	4-16	1.49	1.60	0.79*
Peers' pressures	5.96	2.97	4	16	4-16	1.54	1.43	0.71*
Media pressures	10.09	4.29	4	16	4-16	−0.07	−1.32	0.90*
Internalization – Thin	10.70	3.92	5	20	5-20	0.45	−0.58	0.96*
Internalization – Muscularity	9.10	3.89	5	20	5-20	0.83	−0.10	0.89*

Note. TS – total score range for each variable; Skew – skewness; Kurt – kurtosis; S-W – Shapiro-Wilk test statistic; Internalization – Thin – internalization of thin/low body fat-ideal; Internalization – Muscularity – internalization of muscular/athletic-ideal; *$p < .001$.

χ^2/df = 4.3; CFI = .900; TLI = .883; RMSEA = .050; 90% CI [.047, .053]; *p*-close = .445; SRMR = .075.

In the tested model, perceived appearance-related sociocultural pressures, from family, peers, and media, accounted for 17.8% ($p < .001$) of the variance in the internalization of thin ideals and 2.7% ($p = .003$) of the variance in the internalization of muscularity ideals. The overall model explained 62.8% ($p < .001$) of the variance in eating disorder symptoms and 29.0% ($p < .001$) of the variance in orthorexia nervosa symptoms.

DIRECT EFFECTS OF PERCEIVED APPEARANCE-RELATED SOCIOCULTURAL PRESSURES AND INTERNALIZATION OF THIN AND MUSCULARITY IDEALS ON SYMPTOMS OF EATING DISORDERS AND ORTHOREXIA NERVOSA

Direct effects of perceived appearance-related sociocultural pressures and the internalization of thin and muscularity ideals on symptoms of eating disorders and orthorexia nervosa are presented in Table 2.

The results demonstrate that all perceived appearance-related sociocultural pressures, i.e., pressures originating from family, peers and media, were significant predictors of eating disorder symptoms (β = .27, $p < .001$; β = .20, $p < .001$; β = .16, $p < .001$). Specifically, greater perceived appearance-related sociocultural pressures were associated with more severe eating disorder symptoms. However, only perceived family and media pressures were significant predictors of orthorexia nervosa symptoms (β = .13, $p < .001$; β = .11, $p < .001$), indicating that increased levels of perceived family and media pressures predicted more severe orthorexia nervosa symptoms.

Furthermore, internalization of the thin ideal significantly predicted more severe eating disorder symptoms (β = .47, $p < .001$) and orthorexia nervosa symptoms (β = .23, $p < .001$), whereas internalization of the muscularity ideal significantly predicted only more severe orthorexia nervosa symptoms (β = .29, $p < .001$).

In terms of the internalization of thin and muscularity ideals, all perceived appearance-related sociocultural pressures (family, peers, and media) were significant predictors of stronger internalization of the thin ideal (β =. 06, $p = .034$; β = .12, $p < .001$; β = .33, $p < .001$). By contrast, only perceived media pressures significantly predicted stronger internalization of the muscularity ideal (β = .16, $p < .001$).

INDIRECT EFFECTS OF PERCEIVED APPEARANCE-RELATED SOCIOCULTURAL PRESSURES, THROUGH THIN AND MUSCULARITY IDEALS, ON SYMPTOMS OF EATING DISORDERS AND ORTHOREXIA NERVOSA

The indirect effects of perceived appearance-related sociocultural pressures on symptoms of eating disorders and orthorexia nervosa, mediated through the internalization of thin and muscularity ideals, are presented in Table 3.

All perceived appearance-related sociocultural pressures (family, peers, and media), mediated through stronger internalization of the thin ideal, significantly predicted more severe eating disorder symptoms (β = .03, $p = .038$; β = .06, $p < .001$; β = .15, $p < .001$) and more severe orthorexia nervosa symptoms (β = .02, $p = .042$; β = .03, $p = .001$; β = .08, $p < .001$). Specifically, greater perceived appearance-related pressures from

Table 2

Direct effects of perceived appearance-related sociocultural pressures and internalization of thin and muscularity ideals on symptoms of eating disorders and orthorexia nervosa (N = 1318)

Direct effects	Internalization – Thin		Internalization – Muscularity		Eating disorder symptoms		Orthorexia nervosa symptoms	
	β	*p*	β	*p*	β	*p*	β	*p*
Family pressures	.06*	.034	−.02	.500	.27**	< .001	.13**	< .001
Peers' pressures	.12**	< .001	.02	.612	.20**	< .001	.03	.413
Media pressures	.33**	< .001	.16**	< .001	.16**	< .001	.11**	< .001
Int. – Thin	–	–	–	–	.47**	< .001	.23**	< .001
Int. – Muscularity	–	–	–	–	.02	.608	.29**	< .001
	R^2	*p*	R^2	*p*	R^2	*p*	R^2	*p*
Explained variance	.18**	< .001	.03**	.003	.63**	< .001	.29**	< .001

Note. Int. – Thin. – internalization of thin/low body fat-ideal; Int. – Muscularity – internalization of muscular/athletic-ideal; *$p < .05$, **$p < .01$.

Table 3

Indirect effects of perceived appearance-related sociocultural pressures on symptoms of eating disorders and orthorexia nervosa mediated through the internalization of thin and muscularity ideals (N = 1318)

Indirect effects		Eating disorder symptoms			Orthorexia nervosa symptoms		
		β	*p*	95% CI	β	*p*	95% CI
Family pressures →	Int. – Thin	.03*	.038	.00, .06	.02*	.042	.00, .03
Peers' pressures →		.06**	< .001	.03, .09	.03**	.001	.01, .05
Media pressures →		.15**	< .001	.12, .19	.08**	< .001	.05, .10
Family pressures →	Int. – Muscularity	.00	.684	−.00, .00	−.00	.500	−.02, .01
Peers' pressures →		.00	.731	−.00, .00	.01	.613	−.01, .02
Media pressures →		.00	.611	−.01, .01	.05**	< .001	.03, .07

Note. Int. – Thin – internalization of thin/low body fat-ideal; Int. – Muscularity – internalization of muscular/athletic-ideal; *$p < .05$, **$p < .01$.

family, peers, and media were associated with stronger internalization of the thin ideal, which, in turn, predicted more severe eating disorder and orthorexia nervosa symptoms.

However, no significant indirect effects were found for perceived appearance-related sociocultural pressures from family, peers, or media on eating disorder symptoms when mediated through internalization of the muscularity ideal ($p > .05$). In contrast, for orthorexia nervosa symptoms, only perceived media pressures showed significant indirect effects. Stronger perceived appearance-related media pressures predicted stronger internalization of the muscularity ideal, which, in turn predicted more severe orthorexia symptoms (β = .05, $p < .001$).

DISCUSSION

This study aimed to investigate the direct effects of perceived appearance-related sociocultural pressures and internalization of thin and muscularity ideals on symptoms of eating disorders and orthorexia nervosa. Additionally, the study examined whether the internalization of thin and muscularity ideals mediates the relationship between perceived appearance-related sociocultural pressures and symptoms of eating disorders and orthorexia nervosa.

The study's findings suggest that stronger perceived appearance-related pressures from family, peers, and media, along with greater internalization of thin ideals, are associated with more severe eating disorder symptoms. In contrast, orthorexia symptoms are primarily influenced by family and media pressures, as well as the internalization of both thin and muscularity ideals.

Family, peer, and media influences play a crucial role in shaping eating behaviours and the development of disordered eating patterns (Alfoukha et al., 2017; Makki et al., 2023; Tóth-Király et al., 2021). Parents who are highly preoccupied with their own diet and body image may unintentionally heighten their children's awareness of weight and eating habits (Cheshire et al., 2020; White et al., 2021). Within the context of the present findings, families that focus on "clean" or "healthy" eating may create an environment where young women feel pressured to adopt similar restrictive dietary behaviours. As role models, parents shape their children's eating habits by promoting certain food choices, particularly those labelled as "healthy", reinforcing rigid dietary patterns that may contribute to both eating disorder and orthorexia symptoms (Fortesa & Ajete, 2014).

Similarly, media pressures were significantly associated with more severe symptoms of both eating disorders and orthorexia nervosa, suggesting that heightened exposure to media-driven beauty and health ideals increases vulnerability to these conditions. Media play a central role in the internalization of socially constructed beauty standards, particularly the thin ideal (Williams et al., 2003). However, their influence extends beyond promoting weight loss, as they also reinforce orthorexic tendencies by glorifying extreme health-conscious behaviours and restrictive dietary practices (Haddad et al., 2019; Kovan & Yıldırım, 2025). The findings of this study support previous research indicating that individuals who internalize media-driven body standards are at a higher risk of developing orthorexia (Bi et al., 2024). The widespread promotion of the Western thin ideal, combined with increasing societal pressure to maintain an ultra-healthy lifestyle, may be contributing to the rise of orthorexia in contemporary culture.

Peer pressure, on the other hand, was strongly associated with thin ideals and unhealthy weight control behaviours (Mehmood et al., 2023). This association was also evident in the present study. However, while peer influence could theoretically encourage

adherence to "healthy" eating behaviours associated with orthorexia, this relationship was not supported by our findings. It is possible that peer influences on diet now operate more indirectly through social media rather than direct interactions. Online platforms increasingly reinforce norms around "clean eating" and idealized lifestyles, exerting greater pressure than traditional peer interactions (Hausmann et al., 2017). Additionally, given that the sample consisted of young women aged 18-21, it is likely that family and media exert a stronger influence on dietary habits than peers. Previous research suggested that young people often engage in unhealthy eating patterns, such as frequent fast-food consumption (Gamba et al., 2021), meaning that peers who do not follow strict dietary rules may be less likely to promote them. This aligns with our findings, in which family and media pressures emerged as the strongest predictors of orthorexia symptoms, consistent with previous research showing media's dominant influence over both peers and family (Alfoukha et al., 2017; Tóth-Király et al., 2021).

Building on these findings, the present results demonstrate that greater internalization of thin ideals is associated with higher levels of eating disorder symptoms, while the internalization of both thin and muscularity ideals is associated with higher orthorexia nervosa symptoms. Importantly, these associations reflect predictive relationships within the tested structural equation model, rather than absolute symptom severity in the sample. Exposure to sociocultural influences, particularly from family, peers, and media, reinforces beauty and health standards that, once internalized, contribute to body dissatisfaction and disordered eating behaviours, particularly among young women (Bi et al., 2024; Haddad et al., 2019; Kovan & Yıldırım, 2025; Schaefer et al., 2015; Tóth-Király et al., 2021).

While thinness has long been the dominant Western beauty ideal (Boepple & Thompson, 2015; Ghaznavi & Taylor, 2015), contemporary standards have expanded to include a "fit body" ideal, one that is both lean and muscular. This emerging ideal, which combines thinness with visible muscle tone, presents an even more demanding and complex standard of beauty (Boepple & Thompson, 2015; Deighton-Smith & Bell, 2018; Simpson & Mazzeo, 2017). The internalization of this ideal reflects the increasing conflation of health, discipline, and physical attractiveness in modern culture (Cheshire et al., 2020; Cinquegrani & Brown, 2018). Our findings confirm this shift, as the internalization of both thin and muscularity ideals significantly predicted orthorexia nervosa symptoms. This suggests that orthorexia is not solely driven by thin-related ideals but also by muscularity-related expectations, reinforcing societal pressure to achieve a body that is simultaneously lean, toned, and strong. The fact that muscularity ideal internalization did not predict eating disorder symptoms further supports a key distinction between these conditions. Whereas eating disorders are primarily fuelled by the pursuit of thinness and weight loss, orthorexia appears to emerge from a broader sociocultural drive for health, perfection, and the simultaneous attainment of both thinness and muscularity. This dual emphasis reflects shifting cultural narratives that equate self-worth with maintaining both a restrictive diet and a disciplined fitness regimen, further complicating the landscape of disordered eating behaviours.

The results further support sociocultural theory (Thompson et al., 1999), which suggests that eating disorders develop through the internalization of societal pressures about appearance, diet, and lifestyle. Thin ideal internalization emerged as the key mediator between sociocultural pressures and eating disorder symptoms. Family, peer, and media influences strengthened the internalization of thinness, which in turn predicted more severe eating disorder symptoms. This underscores the strong role of thinness as a sociocultural standard, reinforced across various social contexts. Media exerted the strongest influence, further supporting research on its role in promoting restrictive eating behaviours (Boepple & Thompson, 2015; Ghaznavi & Taylor, 2015).

The pathway to orthorexia symptoms was more complex, mediated by both thin and muscularity ideals. While thin ideal internalization was influenced by family, peer, and media pressures, only media pressures contributed to muscularity ideal internalization. Unlike eating disorders, which are centred on weight loss, orthorexia is not just about controlling body weight but about achieving an idealized "healthy" and "fit" physique. Media play a dominant role in reinforcing these ideals, shaping perceptions of health as both an aesthetic and disciplined pursuit (Delaney & McCarthy, 2014). The internalization of muscularity ideals in orthorexia promotes rigid dietary behaviours focused on food purity and body optimization rather than just weight control. These findings show key differences in the underlying mechanisms of eating disorders and orthorexia: while thin ideals drive restrictive, weight-focused behaviours in eating disorders, the added influence of muscularity ideals in orthorexia encourages an obsessive focus on "clean" and "balanced" eating. This reflects a broader shift in cultural expectations, where health is increasingly tied to aesthetic perfection and strict dietary control.

An important contextual consideration is that data collection took place in 2021, during the COVID-19 pandemic – a period linked to altered dietary patterns and eating-related behaviour (González-Monroy et al., 2021; Onyeaka et al., 2021). This may be relevant for understanding eating disorder and orthorexia symptoms during this period. In Croatia, strict lockdown measures were implemented briefly in March 2020, followed by a gradual relaxation and early social

and economic stabilization (Government of Republic of Croatia, 2020a), including a resumed tourist season by that summer (Government of Republic of Croatia, 2020c). Moreover, Croatia was among the few European countries to maintain a tourist season already in 2020 due to relatively favourable epidemiological conditions (Government of the Republic of Croatia, 2020b), reflecting a comparatively early stabilization of social and economic life. Given this context, while pandemic-related influences cannot be fully ruled out, it is likely that the most pronounced COVID-19 related effects on mental health and eating behaviours had attenuated by the time of data collection. Thus, the observed associations between sociocultural pressures, appearance ideal internalization, and eating-related symptoms likely reflect enduring sociocultural mechanisms rather than temporary crisis responses. Future longitudinal research in post-pandemic contexts would help confirm these conclusions.

When interpreting the results, it is important to consider the study's limitations. The use of a cross-sectional design, rather than a longitudinal approach, prevents us from drawing conclusions about developmental trajectories or the temporal causal relationships between sociocultural pressures, the internalization of these pressures, and symptoms of eating disorders and orthorexia nervosa. To address this limitation, future research should use longitudinal designs to better capture the dynamic nature of these relationships and provide deeper insight into how sociocultural pressures contribute to the development of disordered eating behaviours over time. Moreover, future studies should explore these associations in greater detail by identifying specific sociodemographic, personality, or psychological characteristics that may moderate or mediate the relationship between appearance-related pressures and disordered eating behaviours. Understanding these individual differences could help refine intervention strategies by tailoring them to the profiles of young women who are particularly vulnerable to sociocultural pressures and at higher risk of developing unhealthy eating behaviours. Furthermore, future studies should investigate social media's role in predicting eating disorders and orthorexia nervosa symptoms. Research should focus on content types, such as health- versus appearance-focused media, and the role of influencers.

A key limitation of this study is its online data collection, which carries typical constraints of web-based research. Despite measures to ensure that participants were women aged 18 to 21, such as explicit age instructions, screening questions, and filtering out ineligible responses, we cannot be entirely certain the final sample fully represented this demographic. Another limitation is the narrow age range of participants, restricting the generalizability of the findings. While the study intentionally focused on women aged 18 to 21, as eating disorders and orthorexia are particularly prevalent during this developmental period, this age group also represents a contextually specific life stage. The sample included a substantial proportion of university students, characterized by increased independence, transitions in living arrangements, and greater responsibility for food-related decisions, which may increase vulnerability to eating-related difficulties (Eguren-García et al., 2024). It therefore remains unclear whether the observed relationships would generalize to other age groups. Future research should include a broader age range to examine how sociocultural pressures and disordered eating symptoms vary across different developmental stages. Furthermore, as the sample consisted exclusively of young women in Croatia, the cultural generalizability of the findings is limited. Future studies should include more culturally diverse samples to enhance generalizability.

Another important limitation concerns the assessment of eating disorder symptoms. Although the EAT-26 is widely used as a screening instrument, the present study did not employ the original 26-item version. Instead, an adapted 11-item version (EAT-11) with a four-factor structure and a general second-order factor was used. This modification was necessary due to persistent structural problems of the original EAT-26 observed in the present sample of late-adolescent women. While the adapted version demonstrated better model fit and internal consistency for this population, the use of EAT-11 limits the direct comparability of the present findings with studies that applied the original EAT-26 scoring procedure. Consequently, the results should be interpreted as reflecting general eating disorder symptomatology rather than specific diagnostic symptom clusters, and future research is encouraged to replicate these findings using the original EAT-26 or alternative validated measures.

This study provides valuable theoretical insights into the mechanisms through which sociocultural influences contribute to disordered eating and orthorexic symptoms. Using structural equation modelling, we examined how appearance-related pressures mediate the link between these influences and symptoms of eating disorders and orthorexia nervosa. Importantly, our results extend existing sociocultural models of eating pathology by showing that thin-ideal internalization is a shared risk factor for both eating disorder and orthorexia symptoms, whereas muscularity-ideal internalization shows a more specific association with orthorexic symptomatology. These findings show that orthorexia, while overlapping with eating disorders, may be driven by distinct sociocultural pathways.

In addition to identifying risk mechanisms, the present findings also have implications for understanding potential protective factors against the internalization of unrealistic appearance standards and the development of eating-related difficulties. Given the

indirect effects of thin-ideal internalization on both eating disorder and orthorexia symptoms through sociocultural pressures, prevention programmes for young women should prioritize reducing thin-ideal internalization and perceived appearance pressure. Media literacy interventions in secondary schools and universities should explicitly address the harmful effects of thinness-focused content, particularly on social media, and teach strategies to resist appearance-based comparison. In contrast, the specific association between muscularity ideals and orthorexia symptoms indicates that interventions targeting orthorexic tendencies should also address health- and fitness-oriented appearance ideals, including the normalization of rigid "clean eating" and body-optimization narratives. In addition, because internalization of appearance ideals emerged as a central mediator of sociocultural pressures in our model, involving parents and educators in intervention efforts is essential. Providing guidance on how appearance-focused comments and health-related moralization of food may unintentionally reinforce these pressures could help reduce risk. At a broader level, public health campaigns should move beyond generic healthy-eating messages and explicitly warn against extreme dietary control and health perfectionism, which our findings suggest are particularly relevant to the development of orthorexic symptoms.

Supplementary materials are available on the journal's website.

Disclosures

This research received no external funding.
The study was approved by the Ethics Committee of the Department of Psychology of the Faculty of Humanities and Social Sciences at the University of Zagreb (Approval No. 11-73/19-358).
The authors declare no conflict of interest.

References

Alfoukha, M. M., Hamdan-Mansour, A. M., & Banihani, M. A. (2017). Social and psychological factors related to risk of eating disorders among high school girls. *The Journal of School Nursing, 35*, 169–177. https://doi.org/10.1177/1059840517737140

Almutairi, R., Azuhairi, A. A., Mahmud, A., & Dablool, A. S. (2023). Eating disorders among adolescent female students in Jeddah, Saudi Arabia. *Malaysian Journal of Medical Sciences, 30*, 185–197. https://doi.org/10.21315/mjms2023.30.1.16

Aloi, M., Moniaci, M., Rania, M., Carbone, E. A., Martino, G., Segura-Garcia, C., & Liuzza, M. C. (2023). Relationship between disgust and orthorexia nervosa and psychometric properties of the Italian Dusseldorf Orthorexia Scale in a general population sample. *Journal of Eating Disorders, 11*, 174. https://doi.org/10.1186/s40337-023-00899-5

Ambrosi-Randić, N., & Pokrajac-Bulian, A. (2005). Psychometric properties of the eating attitudes test and children's eating attitudes test in Croatia. *Eating and Weight Disorders – Studies on Anorexia, Bulimia and Obesity, 10*, e76–e82. https://doi.org/10.1007/bf03327495

Atchison, A. E., & Zickgraf, H. F. (2022). Orthorexia nervosa and eating disorder behaviors: a systematic review of the literature. *Appetite, 177*, 106134. https://doi.org/10.1016/j.appet.2022.106134

Barakat, S., McLean, S. A., Bryant, E., Le, A., Marks, P., Aouad, P., Barakat, S., Boakes, R., Brennan, L., Bryant, E., Byrne, S., Caldwell, B., Calvert, S., Carroll, B., Castle, D., Caterson, I., Chelius, B., Chiem, L., Clarke, S., & Conti, J. (2023). Risk factors for eating disorders: Findings from a rapid review. *Journal of Eating Disorders, 11*, 8. https://doi.org/10.1186/s40337-022-00717-4

Barthels, F., Meyer, F., & Pietrowsky, R. (2015). Orthorexic eating behavior. *Ernahrungs Umschau, 62*, 156–161. https://doi.org/10.4455/eu.2015.029

Bi, X., Liang, Q., Jiang, G., Deng, M., Cui, H., & Ma, Y. (2024). The cost of the perfect body: Influence mechanism of internalization of media appearance ideals on eating disorder tendencies in adolescents. *BMC Psychology, 12*, 138. https://doi.org/10.1186/s40359-024-01619-7

Blažev, D. (2023). *Verification of the biopsychosocial model of orthorexia* [Doctoral dissertation]. University of Zagreb, Faculty of Humanities and Social Sciences. https://urn.nsk.hr/urn:nbn:hr:131:930251

Boepple, L., & Thompson, J. K. (2015). A content analytic comparison of fitspiration and thinspiration websites. *International Journal of Eating Disorders, 49*, 98–101. https://doi.org/10.1002/eat.22403

Bratman, S. (1997). Health food junkie. *Yoga Journal, 136*, 42–50.

Bratman, S., & Knight, D. (2000). *Health food junkies: Orthorexia nervosa – overcoming the obsession with healthful eating.* Broadway.

Bruening, M., Eisenberg, M., MacLehose, R., Nanney, M. S., Story, M., & Neumark-Sztainer, D. (2012). Relationship between adolescents' and their friends' eating behaviors: Breakfast, fruit, vegetable, whole-grain, and dairy intake. *Journal of the Academy of Nutrition and Dietetics, 112*, 1608–1613. https://doi.org/10.1016/j.jand.2012.07.008

Cheshire, A., Berry, M., & Fixsen, A. (2020). What are the key features of orthorexia nervosa and influences on its development? A qualitative investigation. *Appetite, 155*, 104798. https://doi.org/10.1016/j.appet.2020.104798

Cinquegrani, C., & Brown, D. H. K. (2018). 'Wellness' lifts us above the food chaos: a narrative explo-

ration of the experiences and conceptualisations of orthorexia nervosa through online social media forums. *Qualitative Research in Sport, Exercise and Health, 10*, 585–603. https://doi.org/10.1080/2159676X.2018.1464501

Crawford, R. (1980). Healthism and the medicalization of everyday life. *International Journal of Health Services, 10*, 365–388. https://doi.org/10.2190/3h2h-3xjn-3kay-g9ny

Dane, A., & Bhatia, K. (2023). The social media diet: a scoping review to investigate the association between social media, body image and eating disorders amongst young people. *PLOS Global Public Health, 3*, e0001091. https://doi.org/10.1371/journal.pgph.0001091

Delaney, M., & McCarthy, M. B. (2014). Saints, sinners and non-believers: the moral space of food. A qualitative exploration of beliefs and perspectives on healthy eating of Irish adults aged 50-70. *Appetite, 73*, 105–113. https://doi.org/10.1016/j.appet.2013.10.017

Deighton-Smith, N., & Bell, B. T. (2018). Objectifying fitness: a content and thematic analysis of #fitspiration images on social media. *Psychology of Popular Media Culture, 7*, 467–483. https://doi.org/10.1037/ppm0000143

Donini, L. M., Barrada, J. R., Barthels, F., Dunn, T. M., Babeau, C., Brytek-Matera, A., Cena, H., Cerolini, S., Cho, H., Coimbra, M., Cuzzolaro, M., Ferreira, C., Galfano, V., Grammatikopoulou, M. G., Hallit, S., Håman, L., Hay, P., Jimbo, M., Lasson, C., & Lindgren, E. C. (2022). A consensus document on definition and diagnostic criteria for orthorexia nervosa. *Eating and Weight Disorders – Studies on Anorexia, Bulimia and Obesity, 27*, 3695–3711. https://doi.org/10.1007/s40519-022-01512-5

Doninger, G. L., Enders, C. K., & Burnett, K. F. (2005). Validity evidence for Eating Attitudes Test scores in a sample of female college athletes. *Measurement in Physical Education and Exercise Science, 9*, 35–49. https://doi.org/10.1207/s15327841mpee0901_3

Eguren-García, I., Sumalla-Cano, S., Conde-González, S., Vila-Martí, A., Briones-Urbano, M., Martínez-Díaz, R., & Iñaki Elío. (2024). Risk factors for eating disorders in university students: The RUNEAT Study. *Healthcare, 12*, 942–942. https://doi.org/10.3390/healthcare12090942

Fidan, T., Ertekin, V., Işikay, S., & Kırpınar, I. (2010). Prevalence of orthorexia among medical students in Erzurum, Turkey. *Comprehensive Psychiatry, 51*, 49–54. https://doi.org/10.1016/j.comppsych.2009.03.001

Fortesa, K., & Ajete, K. (2014). Family influence on disordered eating behaviour. *Procedia – Social and Behavioral Sciences, 159*, 314–318. https://doi.org/10.1016/j.sbspro.2014.12.379

Franzini Pereira, R., & Alvarenga, M. (2007). Disordered eating: Identifying, treating, preventing, and differentiating it from eating disorders. *Diabetes Spectrum, 20*, 141–148. https://doi.org/10.2337/diaspect.20.3.141

Gamba, R. J., Schmeltz, M. T., Ortiz, N., Engelman, A., Lam, J., Ampil, A., Pritchard, M. M., Santillan, J. K. A., Rivera, E. S., Wood, L. M., Ingram, D., Cheyne, K., & Taylor, S. (2021). "Spending all this time stressing and worrying and calculating": Marginal food security and student life at a diverse urban university. *Public Health Nutrition, 24*, 2788–2797. https://doi.org/10.1017/s1368980021001300

Garner, D. M., Olmsted, M. P., Bohr, Y., & Garfinkel, P. E. (1982). The Eating Attitudes Test: Psychometric features and clinical correlates. *Psychological Medicine, 12*, 871–878. https://doi.org/10.1017/s0033291700049163

Ghaznavi, J., & Taylor, L. D. (2015). Bones, body parts, and sex appeal: an analysis of #thinspiration images on popular social media. *Body Image, 14*, 54–61. https://doi.org/10.1016/j.bodyim.2015.03.006

Gilmour, A., Gill, S., & Loudon, G. (2020). Young adolescents' experiences and views on eating and food. *Young Consumers, 21*, 389–402. https://doi.org/10.1108//YC

Gimlin, D. L. (2002). *Body work: Beauty and self-image in American culture.* University of California Press.

González-Monroy, C., Gómez-Gómez, I., Olarte-Sánchez, C. M., & Motrico, E. (2021). Eating behaviour changes during the COVID-19 pandemic: a systematic review of longitudinal studies. *International Journal of Environmental Research and Public Health, 18*, 11130–11130. https://doi.org/10.3390/ijerph182111130

Goodman, J. R. (2011). Mapping the sea of eating disorders: a structural equation model of how peers, family, and media influence body image and eating disorders. *Visual Communication Quarterly, 12*, 194–213. https://doi.org/10.1080/15551393.2005.9687457

Government of Republic of Croatia (2020a, April 14). Beroš: U sljedećem razdoblju promišljanje o opuštanju mjera [Beroš: In the next period, consideration will be given to relaxing measures]. Retrieved from https://vlada.gov.hr/beros-u-sljedecem-razdoblju-promisljanje-o-opustanju-mjera/29225

Government of Republic of Croatia (2020b, May 6). Stožer: Imamo jednu od najpovoljnijih epidemioloških situacija u Europi i svijetu [Headquarters: We have one of the most favorable epidemiological situations in Europe and the world]. Retrieved from https://vlada.gov.hr/stozer-imamo-jednu-od-najpovoljnijih-epidemioloskih-situacija-u-europi-i-svijetu/29416

Government of Republic of Croatia (2020c, June 17). Božinović: Hrvatska je sigurna i jedna je od rijetkih koja će imati turističku sezonu [Božinović: Croatia is safe and one of the few that will have a tourist season]. Retrieved from https://vlada.gov.hr/bozinovic-hrvatska-je-sigurna-i-jedna-je-od-rijetkih-koja-ce-imati-turisticku-sezonu/29758

Haddad, C., Obeid, S., Akel, M., Honein, K., Akiki, M., Azar, J., & Hallit, S. (2019). Correlates of orthorexia nervosa among a representative sample of the Lebanese population. *Eating and Weight Disorders – Studies on Anorexia, Bulimia and Obesity, 24*, 481–493. https://doi.org/10.1007/s40519-018-0631-x

Hausmann, J. S., Touloumtzis, C., White, M. T., Colbert, J. A., & Gooding, H. C. (2017). Adolescent and young adult use of social media for health and its implications. *Journal of Adolescent Health, 60*, 714–719. https://doi.org/10.1016/j.jadohealth.2016.12.025

Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling, 6*, 1–55. https://doi.org/10.1080/10705519909540118

Kline, R. B. (2011). *Principles and practice of structural equation modeling* (3rd ed.). Guilford.

Kovan, A. & Yıldırım, M. (2025). Social media use, eating attitudes, orthorexia nervosa and well-being: Testing a moderated mediation model. *Eating and Weight Disorders – Studies on Anorexia Bulimia and Obesity, 30*, 79–79. https://doi.org/10.1007/s40519-025-01753-0

Makki, N., Althubyani, S. A., Mobarki, R. Q., Alsayed, J. A., Almohammadi, R. J., & Baabdullah, R. A. (2023). The effect of sociocultural attitudes on developing eating disorders among young females in Almadinah Almunawarah, Saudi Arabia. *Cureus, 15*, e50576. https://doi.org/10.7759/cureus.50576

Mehmood, T., Raza, S., Naeem, M. H., Mohammad, A., & Fatima, N. (2023). Perceived sociocultural pressure and body dissatisfaction among female university students. *Journal of Health and Rehabilitation Research, 3*, 908–920. https://doi.org/10.61919/jhrr.v3i2.269

Nicolosi, G. (2006). Biotechnologies, alimentary fears and the orthorexic society. *Tailoring Biotechnologies, 2*, 37–56.

Ocker, L. B., Lam, E. T., Jensen, B. E., & Zhang, J. J. (2007). Psychometric properties of the Eating Attitudes Test. *Measurement in Physical Education and Exercise Science, 11*, 25–48. https://doi.org/10.1080/10913670709337010

Onyeaka, H., Anumudu, C. K., Al-Sharify, Z. T., Egele-Godswill, E., & Mbaegbu, P. (2021). COVID-19 pandemic: a review of the global lockdown and its far-reaching effects. *Science Progress, 104*. https://doi.org/10.1177/00368504211019854

Quiles Marcos, Y., Quiles Sebastián, M. J., Pamies Aubalat, L., Botella Ausina, J., & Treasure, J. (2013). Peer and family influence in eating disorders: a meta-analysis. *European Psychiatry, 28*, 199–206. https://doi.org/10.1016/j.eurpsy.2012.03.005

Rogoza, R., Hallit, S., Soufia, M., Barthels, F., & Obeid, S. (2021). Validation of the Arabic version of the Düsseldorf Orthorexia Scale (DOS) among Lebanese adolescents. *Journal of Eating Disorders, 9*, 130. https://doi.org/10.1186/s40337-021-00488-4

Schaefer, L. M., Burke, N. L., Thompson, J. K., Dedrick, R. F., Heinberg, L. J., Calogero, R. M., Bardone-Cone, A. M., Higgins, M. K., Frederick, D. A., Kelly, M., Anderson, D. A., Schaumberg, K., Nerini, A., Stefanile, C., Dittmar, H., Clark, E., Adams, Z., Macwana, S., Klump, K. L., … Swami, V. (2015). Development and validation of the Sociocultural Attitudes Towards Appearance Questionnaire-4 (SATAQ-4). *Psychological Assessment, 27*, 54–67. https://doi.org/10.1037/a0037917

Simpson, C. C., & Mazzeo, S. E. (2017). Attitudes toward orthorexia nervosa relative to DSM-5 eating disorders. *International Journal of Eating Disorders, 50*, 781–792. https://doi.org/10.1002/eat.22710

Stojcic, I., Dong, X., & Ren, X. (2020). Body image and sociocultural predictors of body image dissatisfaction in Croatian and Chinese women. *Frontiers in Psychology, 11*, 731. https://doi.org/10.3389/fpsyg.2020.00731

Thompson, J. K., Heinberg, L. J., Altabe, M., & Tantleff-Dunn, S. (1999). *Exacting beauty: Theory, assessment, and treatment of body image disturbance.* American Psychological Association.

Tóth-Király, I., Gajdos, P., Román, N., Vass, N., & Rigó, A. (2021). The associations between orthorexia nervosa and the sociocultural attitudes: The mediating role of basic psychological needs and health anxiety. *Eating and Weight Disorders – Studies on Anorexia, Bulimia and Obesity, 26*, 125–134. https://doi.org/10.1007/s40519-019-00826-1

White, M., Berry, R., Sharma, A., & Rodgers, R. F. (2021). A qualitative investigation of orthorexia nervosa among U.S. college students: Characteristics and sociocultural influences. *Appetite, 162*, 105168. https://doi.org/10.1016/j.appet.2021.105168

Williams, M. S., Thomsen, S. R., & McCoy, J. K. (2003). Looking for an accurate mirror: a model for the relationship between media use and anorexia. *Eating Behaviors, 4*, 127–134. https://doi.org/10.1016/s1471-0153(03)00015-1