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When imaging meets aesthetics: Survey-based evidence on kalórexia and body perception

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Abstract

Introduction: Contemporary beauty perception is increasingly shaped by digital technologies, social media exposure, and the normalization of aesthetic interventions. The widespread use of image-editing applications and algorithm-driven visual standards has amplified unrealistic aesthetic expectations, particularly among younger individuals. Recent conceptual work has introduced kalórexia as an emerging aesthetic dysmorphism characterized by digitally mediated appearance-related distress, distinct from traditional body dysmorphic disorder due to its strong technological determinants. Empirical data on how individuals perceive beauty, digital filters, aesthetic procedures, and the potential influence of medical imaging remain limited.

Objective: To investigate digital influences on body image, aesthetic perceptions, and the role of radiological imaging in shaping appearance-related attitudes.

Methods: This cross-sectional, anonymous, web-based survey explored sociodemographic characteristics, digital habits, attitudes toward physical appearance, aesthetic procedures, and the perceived impact of radiological imaging on body image. The questionnaire included multiple-choice and Likert-scale items assessing discomfort, self-image perception, and awareness of digitally shaped beauty standards. A total of 165 individuals completed the survey. Descriptive statistics and subgroup comparisons across three predefined clusters were performed by an independent biostatistician.

Results: Respondents reported frequent social media exposure and varying degrees of preoccupation with appearance. Digital filters were widely perceived as influential, and many participants experienced discomfort when viewing unfiltered images. Aesthetic procedures were relatively common, with heterogeneous satisfaction levels. While most did not seek radiological examinations for aesthetic purposes, many acknowledged that imaging could influence body perception. A substantial proportion recognized kalórexia as a real phenomenon.

Conclusion: Findings support the view of kalórexia as an emerging construct shaped by digital culture, aesthetic norms, and evolving clinical practices. The interplay between social media exposure, discomfort with unfiltered images, aesthetic procedures, and perceived imaging influence underscores the need for interdisciplinary awareness, particularly among radiologists.

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1. Introduction

The perception of beauty has evolved across history, shaped by cultural norms, philosophical traditions, and shifting aesthetic ideals. As Dimitrov and Kroumpouzos[1] noted in their comprehensive review, beauty has always been a dynamic construction, influenced by historical context and societal expectations, and continuously redefined across eras. From classical ideals centered on proportion and symmetry to contemporary standards influenced by globalization and media exposure, aesthetic norms have consistently reflected broader social transformations. In contemporary society, however, this evolution has accelerated dramatically due to the pervasive influence of digital technologies, social media, and algorithm-driven visual exposure. These forces have transformed beauty from a static attribute into a fluid, constantly modulated experience, mediated by screens, filters, and curated online identities.[2-4] The immediacy and repetition of digitally enhanced imagery have intensified visual comparison processes, creating an environment in which appearance is continuously evaluated and re-evaluated.

The psychological implications of this shift are substantial. Merino *et al.*[5] highlighted how social media exposure, body measurements, and cultural norms interact to shape self-esteem, mental health, and body image satisfaction, particularly among younger populations. Their review underscores how digital environments amplify comparison, internalization of unrealistic ideals, and dissatisfaction with one's appearance. These findings align with the broader psychological literature suggesting that beauty is not merely a visual judgment but a complex emotional experience. Brielmann *et al.*[6] described beauty as a "feeling," rooted in affective responses and shaped by cognitive and cultural factors. This conceptualization emphasizes that aesthetic perception engages both emotional regulation and identity formation processes. This emotional dimension becomes particularly relevant in a digital context where images are manipulated, filtered, and optimized to elicit specific reactions.[7,8] The normalization of digital modification may therefore recalibrate individual standards of authenticity, subtly shifting the threshold of what is perceived as acceptable or desirable.

The pursuit of beauty also intersects with broader constructs of well-being and harmony. Delle Fave *et al.*[9] argued that mental health is grounded in dynamic balance and harmony, rather than polarized ideals. However, the contemporary aesthetic landscape often promotes extremes—perfection, symmetry, flawlessness—creating tension between natural variability and digitally imposed standards. This tension is evident across cultures. Kaziga *et al.*[10] showed how adolescents and young women construct body image within specific sociocultural frameworks, demonstrating that beauty ideals are deeply embedded in social narratives and community expectations. These findings reinforce the idea that beauty is not an individual construct but a socially mediated phenomenon.

Digital manipulation further complicates this landscape. MacCallum and Widdows[11] described how unrealistic images and aspirational beauty standards distort self-perception and contribute to altered body image. More recently, Mironica *et al.*[12] demonstrated that social media significantly influences attitudes toward cosmetic surgery, reinforcing the link between digital exposure, aesthetic dissatisfaction, and the desire for physical modification. Additional studies confirm that exposure to idealized or digitally altered images increases body dissatisfaction, comparison behaviors, and interest in aesthetic procedures.[13-15] Collectively, this body of evidence depicts a cultural environment in which beauty is increasingly shaped by technological mediation, algorithmic amplification, and the normalization of enhancement practices.

Within this evolving context, the concept of kalórexia has emerged as a novel framework for understanding the obsessive pursuit of beauty. The term kalórexia derives from the Greek words *kalós* (beautiful) and *órexis* (desire), indicating an intensified and socially reinforced drive toward beauty. First introduced by Giudice *et al.*,[16] kalórexia describes an aesthetic dysmorphism situated at the intersection of digital culture, psychological vulnerability, and the expanding role of aesthetic medicine. The authors proposed that the pursuit of beauty may intensify and be socially reinforced, leading individuals to seek validation through both digital and clinical means. This perspective was further developed by Di Grezia *et al.*,[17] highlighting the emerging involvement of radiologists in aesthetic contexts. As aesthetic expectations increasingly influence patient behavior, radiologists may encounter individuals seeking imaging not solely for clinical indications but also for reassurance, comparison, or aesthetic self-assessment. In this framework, medical imaging may acquire a symbolic dimension, functioning not only as a diagnostic tool but also as a perceived instrument of aesthetic verification.

Despite growing theoretical interest, empirical data on how individuals perceive beauty, digital influence, aesthetic procedures, and the role of medical imaging remain limited. Existing literature provides conceptual and psychological insights but lacks population-based evidence. The present study aims to address this gap by exploring contemporary aesthetic perception through an anonymous web-based survey, examining how individuals relate to their appearance, how digital filters and online images influence self-evaluation, how aesthetic procedures are experienced, and whether imaging is perceived as contributing to body image. By grounding the concept of kalórexia in empirical data, this study contributes to a deeper understanding of the aesthetic dynamics that characterize modern society and offers a foundation for future interdisciplinary research.

2. Materials and methods

This study was conceived as a cross-sectional, anonymous, web-based survey aimed at examining how contemporary individuals perceive beauty, body image, and aesthetic norms in the context of an increasingly digitalized society. The design was exploratory, intended to generate preliminary empirical data on a construct that has thus far been primarily conceptual.

Building on previous conceptual work on kalórexia, the questionnaire was specifically designed to capture not only behavioral patterns but also the subtle psychological and perceptual dynamics that characterize the modern relationship with appearance. The survey was disseminated online through social media and personal networks, allowing broad participation across age groups and educational backgrounds. Participation was entirely voluntary, no incentives were offered, and no identifying information was collected, ensuring full anonymity and minimizing response bias. Prior to participation, individuals were informed about the purpose of the study, and consent was implied by their voluntary completion of the questionnaire. Because the survey was available in both Italian and English, and language/nationality were not collected as variables, a potential cultural-linguistic bias cannot be excluded. As the research consisted of an anonymous, voluntary web-based survey that did not collect identifiable personal data and did not involve clinical interventions, formal institutional ethics committee approval was not required according to applicable regulations. The platform used (Google Forms) restricts duplicate submissions from the same device/account, reducing the likelihood of repeated entries.

The instrument consisted of 16 closed-ended questions, developed to explore 4 interconnected domains: sociodemographic characteristics, lifestyle and digital habits, aesthetic behaviors, and the perceived influence of radiological imaging on body perception. Although no validated psychometric scale for kalórexia currently exists, items were constructed based on established literature on body image, social comparison, and digital exposure to ensure conceptual coherence. Because kalórexia is a newly proposed construct, no pretesting, reliability assessment, or cognitive interviewing could be performed, and the questionnaire should be considered exploratory.

The structure of the questionnaire reflected the multidimensional nature of the phenomenon under investigation. Participants were first asked to provide basic demographic information, followed by items assessing their daily exposure to social media, the frequency with which they reflect on their physical appearance, and the extent to which they compare themselves with images encountered online. Additional questions explored the perceived impact of digital filters, a central element in contemporary visual culture, and the emotional response elicited by viewing one's unfiltered image.

A dedicated section addressed aesthetic procedures, investigating whether participants had undergone any interventions and how they evaluated their overall satisfaction. This component was included to contextualize aesthetic perception within real-world behaviors and to understand whether personal experience with aesthetic medicine influences attitudes toward beauty. The final part of the survey focused on the relationship between body image and medical imaging. Participants were asked whether radiological examinations—such as ultrasound, magnetic resonance imaging (MRI), or computed tomography (CT)—could influence their perception of their own body, and whether they had ever requested or accepted such examinations for aesthetic reasons. The closing item assessed whether kalórexia, defined as the obsessive pursuit of beauty, is perceived as a real and relevant phenomenon in contemporary society. The full questionnaire is publicly accessible at the following link: https://docs.google.com/forms/d/1JAKcU9LdTz0pcU82Swg9luulbtBuhRAVbAgjsxiPFCo/edit.

The primary outcome of the study was the recognition of kalórexia as a real social phenomenon. Secondary outcomes included the perceived influence of digital filters, the emotional impact of unfiltered self-images, the prevalence and satisfaction of aesthetic procedures, the perceived role of medical imaging in shaping body perception, and the sense of social pressure related to appearance.

All responses were automatically recorded in a secure database. Statistical analyses were performed

by an independent biostatistician, who conducted a comprehensive descriptive evaluation of all variables using R version 4.5.0 (R Foundation for Statistical Computing, Austria). Categorical variables were expressed as frequencies and percentages, while continuous variables were summarized using means and standard deviations where appropriate. In addition to the overall analysis, subgroup comparisons were carried out across three predefined clusters corresponding to age groups to explore potential differences in aesthetic perception, digital behaviors, and attitudes toward imaging. No inferential statistics or hypothesis-testing procedures were planned, consistent with the exploratory nature of the study.

3. Results

A total of 165 individuals completed the survey, distributed across three predefined age-based subgroups (n = 13, n = 93, n = 58). Minor discrepancies in totals across specific items reflect missing responses, as participants were allowed to skip individual questions. The overall sample was predominantly female (142/165, 87.1%), with consistently high proportions across all age groups (Table 1). The option "Never" was available for the item "How often do you think about your physical appearance?" but was not selected by any participant.

Educational levels varied, with 22.7% held a high school diploma, 11.0% a Bachelor's degree, 45.4% a Master's degree, and 20.9% a PhD or equivalent. Most respondents were employed (79.8%), although employment rates differed across age clusters.

Daily exposure to social media showed substantial variability. Nearly half of the sample (49.7%) reported spending 1–3 hours per day on social platforms, while 30.7% reported spending less than 1 hour, 16.0% reported spending 3–5 hours, and 3.7% reported spending more than 5 hours. Physical activity habits also differed: 28.2% never exercised, 28.8% exercised occasionally, 40.5% exercised regularly, and 2.5% engaged in intensive activity. These patterns suggest heterogeneous lifestyle profiles that may influence body awareness and self-perception.

Participants' attitudes toward their physical appearance ranged widely. Nearly half (47.6%) reported thinking about their appearance "sometimes," 40.9% "often," and 11.5% "very often." Comparison with online images was also common: 41.2% reported doing so "sometimes," 34.5% "often," and 24.2% "very often." Digital filters were widely perceived as influential, with 52.7% indicating that filters "moderately" affect the perception of real beauty and 39.4% indicating a "strong" influence. Discomfort when viewing one's unfiltered image was also frequent: 33.3% reported "occasional" discomfort, 30.9% "frequent" discomfort, and 10.3% "constant" discomfort.

Regarding aesthetic procedures, most respondents (72.7%) had never undergone cosmetic interventions, while 27.3% reported previous treatments. Among those with experience, satisfaction levels varied: 27.3% described the results as slightly satisfactory, 39.8% as moderately satisfactory, and 32.9% as highly satisfactory. These findings suggest that aesthetic interventions do not uniformly resolve appearance-related concerns and may coexist with ongoing self-evaluative processes.

The perceived relationship between medical imaging and body perception emerged as another relevant dimension. While 70.6% did not believe that radiological examinations influence body image, 27.6% expressed uncertainty, and 1.8% agreed that imaging could affect their perception of their body. Only a small minority reported having requested or accepted radiological exams for aesthetic reasons (7.3% at least once), with most respondents denying such experiences (92.7%). However, the presence of uncertainty among a notable proportion of participants indicates that the symbolic or interpretative role of imaging in shaping self-perception cannot be entirely excluded.

Perceived social pressure to appear "beautiful" varied across the sample: 31.1% reported never feeling such pressure, 47.6% rarely, 17.7% often, and 3.7% always. When asked whether beauty today matters more than health or culture, 50.6% responded "no," 34.8% "partially," and 14.6% "yes."

The overall distribution of responses regarding the recognition of kalórexia as a real phenomenon is visually summarized in Figure 1. A substantial proportion of respondents acknowledged kalórexia as a plausible or recognizable social phenomenon, suggesting that the construct resonates with contemporary lived experience.

These results highlight multiple interconnected domains influencing contemporary body perception, including digital exposure, emotional responses to appearance, aesthetic behaviors, and perceived roles of medical imaging. Together, the findings depict a multidimensional framework in which aesthetic self-perception is shaped by technological, psychological, and sociocultural factors operating simultaneously rather than independently. Table 2 provides a descriptive synthesis of these domains and does not derive from a Delphi or consensus-based methodology.

4. Discussion

The findings of this survey expand the conceptual framework previously introduced in the literature on

Table 1. Sociodemographic characteristics, digital habits, aesthetic behaviors, and perceptions related to medical imaging across the three predefined clusters

Parameter	All	<30 years	30–50 years	>50 years
n	165	13	92	58
Gender: Female	142 (87.1)	10 (76.9)	80 (87.0)	52 (89.7)
Education level				
High school	37 (22.7)	5 (38.5)	18 (19.6)	14 (24.1)
Bachelor's degree	18 (11.0)	4 (30.8)	14 (15.2)	0 (0.0)
Master's degree	74 (45.4)	4 (30.8)	40 (43.5)	30 (51.7)
PhD or other	34 (20.9)	0 (0.0)	20 (21.7)	14 (24.1)
Currently employed	130 (79.8)	7 (53.8)	85 (92.4)	38 (65.5)
Average time spent on social media per day				
Less than 1 h	50 (30.7)	0 (0.0)	17 (18.5)	33 (56.9)
1–3 h	81 (49.7)	6 (46.2)	55 (59.8)	20 (34.5)
3–5 h	26 (16.0)	7 (53.8)	16 (17.4)	3 (5.2)
More than 5 h	6 (3.7)	0 (0.0)	4 (4.3)	2 (3.4)
Do you practice physical activity regularly (at least twice a week)?				
Never	46 (28.2)	5 (38.5)	22 (23.9)	19 (32.8)
Occasionally	47 (28.8)	3 (23.1)	29 (31.5)	15 (25.9)
Regularly	66 (40.5)	5 (38.5)	38 (41.3)	23 (39.7)
Intensively	4 (2.5)	0 (0.0)	3 (3.3)	1 (1.7)
How often do you think about your physical appearance?				
Sometimes	78 (47.6)	6 (46.2)	40 (43.5)	31 (53.4)
Often	67 (40.9)	4 (30.8)	41 (44.6)	22 (37.9)
Very often	19 (11.6)	3 (23.1)	11 (12.0)	5 (8.6)
Do you compare yourself to images or people you see online?				
Never	51 (31.1)	1 (7.7)	18 (19.6)	32 (55.2)
Rarely	74 (45.1)	5 (38.5)	46 (50.0)	22 (37.9)
Often	33 (20.1)	5 (38.5)	25 (27.2)	3 (5.2)
Always	6 (3.7)	2 (15.4)	3 (3.3)	1 (1.7)

(*cont'd...*)

Table 1. (*Continued*)

Parameter	All	<30 years	30–50 years	>50 years
Do you think digital filters influence the perception of real beauty?				
No	3 (1.8)	0 (0.0)	2 (2.2)	1 (1.7)
Slightly	9 (5.5)	0 (0.0)	3 (3.3)	6 (10.3)
Moderately	74 (45.1)	6 (46.2)	45 (48.9)	22 (37.9)
Strongly	78 (47.6)	7 (53.8)	42 (45.7)	29 (50.0)
Do you ever feel uncomfortable seeing your unfiltered image?				
No	71 (43.3)	5 (38.5)	33 (35.9)	32 (55.2)
Rarely	46 (28.0)	3 (23.1)	29 (31.5)	14 (24.1)
Often	29 (17.7)	3 (23.1)	18 (19.6)	8 (13.8)
Always	18 (11.0)	2 (15.4)	12 (13.0)	4 (6.9)
Have you ever undergone aesthetic procedures?				
No	103 (62.4)	9 (69.2)	57 (62.0)	36 (62.1)
Yes	62 (37.6)	4 (30.8)	35 (38.0)	22 (37.9)
If yes, how would you evaluate the result and your overall satisfaction?				
Slightly satisfactory, I considered another procedure	2 (3.2)	2 (50.0)	0 (0.0)	0 (0.0)
Satisfactory, but would consider a touch-up	36 (58.1)	1 (25.0)	20 (57.1)	14 (63.6)
Very satisfactory, no desire for further procedures	24 (38.7)	1 (25.0)	15 (42.9)	8 (36.4)
Do you think medical imaging (ultrasound, MRI, etc.) can influence body perception?				
No	115 (70.6)	8 (61.5)	68 (74.7)	38 (65.5)
Maybe	45 (27.6)	4 (30.8)	23 (25.3)	18 (31.0)
Yes	3 (1.8)	1 (7.7)	0 (0.0)	2 (3.4)
Have you ever requested or accepted a radiological exam for aesthetic reasons?				
No	152 (92.7)	11 (84.6)	87 (94.6)	53 (91.4)
Yes, once	10 (6.1)	2 (15.4)	5 (5.4)	3 (5.2)
Yes, several times	2 (1.2)	0 (0.0)	0 (0.0)	2 (3.4)
Do you feel under pressure to appear "beautiful"?				
Never	51 (31.1)	3 (23.1)	23 (25.0)	25 (43.1)
Rarely	78 (47.6)	7 (53.8)	45 (48.9)	25 (43.1)
Often	29 (17.7)	1 (7.7)	20 (21.7)	8 (13.8)
Always	6 (3.7)	2 (15.4)	4 (4.3)	0 (0.0)
Do you think beauty today matters more than health or culture?				
No	83 (50.6)	6 (46.2)	43 (46.7)	34 (58.6)
Partially	57 (34.8)	4 (30.8)	37 (40.2)	16 (27.6)
Yes	24 (14.6)	3 (23.1)	12 (13.0)	8 (13.8)

Notes: Data are expressed as *n* (%). Minor discrepancies in totals across specific items reflect missing responses, as participants were allowed to skip individual questions.
Abbreviation: MRI: Magnetic resonance imaging.

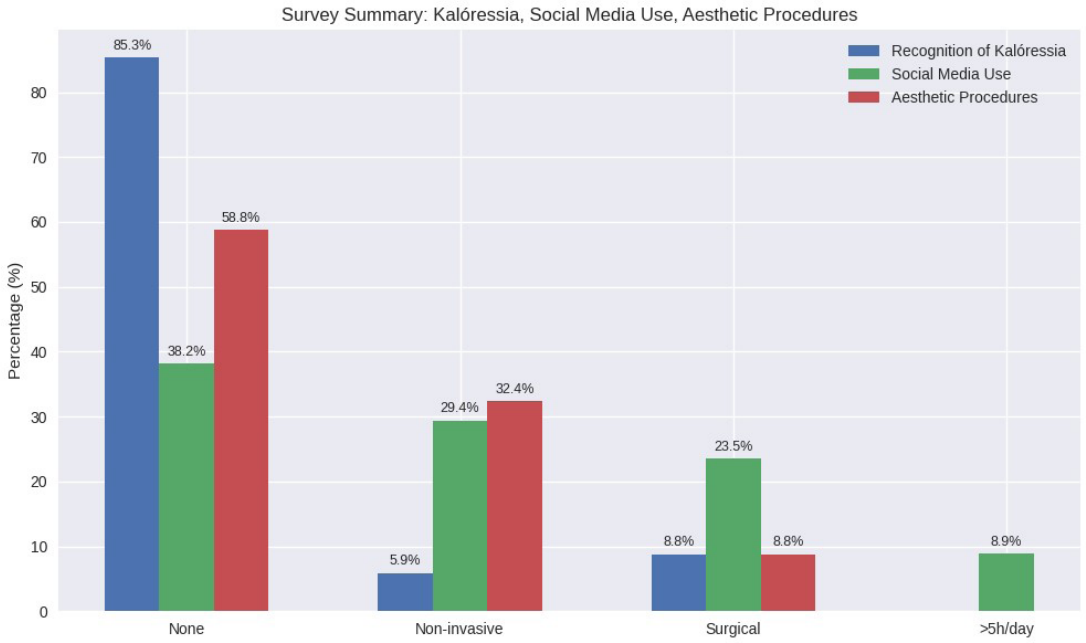


Figure 1. Distribution of responses regarding the perception of kalórexia as a real phenomenon in contemporary society

Table 2. Conceptual framework of kalórexia: Interaction between digital exposure, aesthetic behaviors, and medical imaging

Domain	Key elements	Evidence from survey findings	Clinical implications
Digital environment	Social media exposure, online comparison, digital filters	High daily exposure to social media; widespread perception that digital filters influence the concept of real beauty; frequent comparison with online images	Reinforcement of unrealistic beauty standards and altered self-perception
Emotional response to appearance	Self-scrutiny, discomfort with unfiltered image	A relevant proportion of participants reported discomfort when viewing their unfiltered appearance	Increased vulnerability to aesthetic dissatisfaction and compulsive self-monitoring
Aesthetic behaviors	Cosmetic procedures, satisfaction and desire for further interventions	Aesthetic procedures are reported by a substantial minority, with heterogeneous levels of satisfaction and interest in additional treatments	Normalization of aesthetic medicine as a response to perceived body imperfection
Medical imaging perception	Symbolic role of imaging, aesthetic self-assessment	Many respondents acknowledged that radiological imaging may influence body perception, despite not actively seeking exams for aesthetic reasons	Imaging may acquire a perceptual and symbolic value beyond diagnostic intent
Social awareness of kalórexia	Recognition of the obsessive pursuit of beauty	A substantial proportion of participants recognized kalórexia as a real phenomenon	Supports kalórexia as a socially mediated and clinically relevant construct
Interdisciplinary relevance	Radiology, psychology, aesthetic medicine	Converging influence of digital culture and clinical practices	Need for increased awareness among radiologists and clinicians regarding aesthetic-driven expectations

kalórexia, offering empirical support to a phenomenon that had initially been described from a theoretical and clinical perspective. In a previous work, Giudice *et al.*[16] proposed the term kalórexia to describe a form of aesthetic dysmorphism emerging at the intersection of digital culture, psychological vulnerability, and the increasing normalization of aesthetic interventions. That work outlined the conceptual foundations of the condition, emphasizing how the pursuit of beauty may become obsessive, socially reinforced, and intertwined with both psychiatric and radiological dimensions. The present study provides quantitative evidence that aligns with and reinforces those initial observations, showing that many individuals experience a complex relationship with their appearance, shaped by digital filters, online comparison, and varying degrees of discomfort with their unfiltered image—patterns widely documented in the literature on social comparison and digital manipulation.[7,8,18,19]

Importantly, the data suggest that aesthetic dissatisfaction is not limited to individuals who actively pursue cosmetic interventions. Even among participants who had never undergone aesthetic procedures, exposure to digitally modified images and engagement in comparison behaviors were common. This finding supports the hypothesis that kalórexia may operate along a continuum of vulnerability, ranging from mild appearance-related concern to more persistent and socially reinforced preoccupation. In this sense, kalórexia may represent not merely an extreme manifestation of body dissatisfaction but a culturally mediated shift in how aesthetic identity is constructed and maintained. This continuum-based interpretation is consistent with contemporary models of body image disturbance, which increasingly emphasize the fluidity of aesthetic self-perception and the cumulative impact of repeated digital exposure on emotional regulation and self-evaluative processes.

Within this conceptual landscape, it is important to distinguish kalórexia from related constructs. Unlike body dysmorphic disorder, which is characterized by clinically significant distress focused on perceived physical defects, kalórexia is rooted in digitally mediated aesthetic norms, algorithmic exposure, and socially reinforced comparison rather than in the perception of a specific flaw. Similarly, while lookism and "looksmaxxing" describe sociocultural or subcultural practices centered on appearance optimization, kalórexia incorporates a clinical-symbolic dimension in which medical imaging may be perceived as a tool for aesthetic verification. This radiological component—absent in body dysmorphic disorder and lookism—reflects the evolving intersection between digital culture and clinical practice.

The subsequent study by Di Grezia *et al.*[17] further expanded the discussion by highlighting the emerging involvement of radiologists in aesthetic contexts. That work argued that radiologists increasingly encounter patients whose expectations are influenced by aesthetic ideals rather than clinical needs, and that imaging may inadvertently contribute to shaping body perception. The present survey confirms that a substantial proportion of respondents attribute at least some influence to radiological examinations on how individuals perceive their bodies, even though most do not explicitly seek imaging for aesthetic purposes. This observation aligns with broader reflections on the symbolic and perceptual role of imaging within contemporary medical culture, as also discussed in Di Grezia *et al.*'s[20] work on gynecological imaging and in studies exploring the psychological meaning attributed to medical procedures.[21-23] The subtle interplay between diagnostic objectivity and subjective interpretation suggests that imaging may function as a form of "visual validation," particularly for individuals already engaged in heightened aesthetic self-monitoring.

Medical imaging carries an implicit aura of objectivity and anatomical truth. When individuals visualize their internal structures through ultrasound, MRI, or CT scans, the resulting images may be interpreted not only as diagnostic information but also as confirmation—or disconfirmation—of perceived physical adequacy. In individuals already sensitized to aesthetic norms, this exposure may reinforce self-scrutiny and amplify appearance-related evaluation. Although the present study does not establish causality, the acknowledgment by many respondents that imaging can influence body perception suggests that radiological practice may occupy a subtle yet meaningful position within the broader aesthetic landscape. This raises important questions about how clinicians communicate imaging findings and how patients integrate such information into their broader sense of bodily identity.

The results also resonate with the broader reflections presented in the earlier conceptual draft from which this study originated, where the aesthetic self was described as increasingly mediated by digital technologies and social comparison. The widespread perception that digital filters strongly influence the idea of real beauty, together with the discomfort reported when viewing unfiltered images, reflects a cultural environment in which the boundaries between authentic appearance and digitally modified representation are progressively blurred. This aligns with the theoretical premise that kalórexia is not merely an individual preoccupation but a socially constructed phenomenon, reinforced by visual culture,

algorithmic exposure, and the normalization of aesthetic enhancement—dynamics extensively described in the literature on social media and body image.[2-4,12,14,18,24] The cumulative effect of these influences may contribute to a progressive recalibration of what is perceived as "normal," shifting aesthetic expectations in subtle yet pervasive ways.

The presence of aesthetic procedures within the sample, combined with varied levels of satisfaction, further supports the notion that aesthetic medicine has become integrated into everyday life, functioning not only as a corrective tool but also as a means of aligning oneself with perceived social expectations. These dynamics echo the argument advanced in a previous work,[16] where aesthetic interventions were described as both a symptom and a reinforcement of kalórexia, contributing to a cycle in which dissatisfaction, comparison, and the pursuit of improvement coexist. The perception of social pressure to appear "beautiful," reported by many respondents, reinforces the idea that aesthetic norms are not experienced in isolation but are embedded within a broader cultural narrative, consistent with sociocultural models of body image formation.[10,21,22] This interplay between personal vulnerability and collective expectations underscores the importance of considering kalórexia not only as an individual phenomenon but also as a reflection of broader societal dynamics.

Although the survey provides valuable insights, several limitations must be acknowledged. The sample was self-selected and recruited through online dissemination, which may introduce selection bias and limit the generalizability of the findings. The survey was available in both Italian and English, and language/nationality were not collected, introducing a potential cultural-linguistic bias. The cross-sectional design does not allow for temporal or causal inferences, and reliance on self-reported data may be influenced by social desirability or subjective interpretation of the questions. The questionnaire was exploratory and not derived from a validated psychometric instrument, as no validated scale for kalórexia currently exists; no pretesting or reliability assessment was possible. Furthermore, only descriptive statistics were performed, and no inferential analyses were planned, consistent with the exploratory nature of the study. The absence of qualitative components also limits the depth of psychological interpretation. Despite these limitations, the survey offers a meaningful first step toward grounding the concept of kalórexia in empirical evidence and highlights the need for more structured and multidisciplinary research.

5. Conclusion

In conclusion, this survey-based study provides empirical support for kalórexia as an emerging aesthetic dysmorphism rooted in contemporary digital culture and evolving aesthetic norms. The findings confirm that body perception is increasingly shaped by continuous exposure to social media, the pervasive use of digital filters, and the normalization of aesthetic procedures,[2,3,12-14,18,19,21] all of which contribute to heightened self-scrutiny and discomfort with unfiltered appearance. Within this context, beauty emerges not as a fixed ideal but as a dynamic and socially mediated construction, influenced by technological, psychological, and cultural factors.[1,5,6,9] The integration of these dimensions suggests that kalórexia may serve as a useful conceptual lens for interpreting the evolving relationship between individuals and their digitally mediated bodies.

Although most participants did not explicitly seek radiological examinations for aesthetic purposes, a substantial proportion acknowledged that medical imaging could influence body perception. This observation supports the hypothesis that imaging modalities may acquire a symbolic and perceptual role beyond their traditional diagnostic function, particularly in individuals vulnerable to aesthetic dissatisfaction.[17,20,23,24] Such findings reinforce the notion that kalórexia operates at the intersection of digital visual culture, psychological susceptibility, and clinical practices, including radiology. The recognition of kalórexia by a significant number of respondents underscores its relevance as a contemporary social phenomenon rather than a purely theoretical construct.[25-40]

Its emergence is particularly concerning in a society increasingly centered on aesthetics, performance, and body optimization, where the pursuit of an idealized physical image often overshadows fundamental issues of health equity. While some individuals experience pressure to conform to aesthetic norms, large segments of the global population still lack access to basic preventive services, including screening programs and early diagnostic pathways.[41]

This contrast highlights a widening gap: on one side, the cultural obsession with appearance; on the other, communities—especially in low-resource settings—where preventable diseases remain undetected due to limited healthcare infrastructure. In these contexts, risk-stratification tools based on artificial intelligence-driven validation systems could offer a transformative opportunity. Software capable of predicting conditions such as osteoporosis or hypertension from accessible imaging or clinical data may help bridge disparities by enabling earlier identification of individuals at risk, even where traditional diagnostic resources are

scarce.[42-45]

Kalórexia therefore becomes not only a psychosocial indicator of contemporary pressures but also a reminder of the urgent need to rebalance priorities: from aesthetic preoccupations toward equitable, technology-enabled prevention strategies that can benefit both high-income and resource-limited settings.

These results highlight the need for increased interdisciplinary awareness, especially among radiologists and clinicians, who may encounter patients whose expectations are subtly shaped by aesthetic ideals rather than clinical necessity. Despite limitations related to sample size, self-selection, and the cross-sectional design, this study represents an important step toward grounding kalórexia in population-based evidence. Future research should expand on these findings through larger, longitudinal, and qualitative studies to better define the psychological, sociocultural, and clinical dimensions of kalórexia, ultimately contributing to a more responsible and ethically informed integration of aesthetic perception within medical practice.

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Conflict of interest

The authors declare they have no competing interests.

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Ethics approval and consent to participate

According to national regulations for anonymous survey-based research, formal ethical committee approval was not mandatory. The study involved an anonymous, voluntary, web-based questionnaire that collected no identifiable personal data and included no clinical interventions. Participants were informed about the purpose of the study before accessing the survey, and consent was implied through voluntary completion. Data were collected and stored in compliance with applicable privacy and data-protection standards.

Consent for publication

The study involved an anonymous, voluntary, web-based questionnaire that collected no identifiable personal data and included no clinical interventions.

Availability of data

The data are available from the corresponding author upon reasonable request.

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