

Gender stereotypes and the representation of body and nutrition: a study of fitness accounts on Instagram

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Abstract : On Instagram, fitness influencers, ambassadors of a healthy lifestyle, share their daily lives with millions of followers, through a variety of publications mixing physical exercise and advice on diet. Yet, beyond the visual filters and carefully crafted images, there are clear distinctions in the way men and women approach these themes. This research aims to identify gendered differences between fitness influencers on Instagram, particularly in terms of body representation, diet and self-staging. A netnography on 55 fitness influencer accounts (27 women, 28 men) was conducted over 6 months. The results echo previous sociological work that has examined these disparities in non-digital contexts. However, it seems that the "social network effect" exacerbates these dynamics, amplifying them in particular with influencers who embody role models. From a managerial point of view, this research provides brands with additional keys to understanding influence marketing, and aims to alert public authorities to certain abuses.

Keywords : Instagram; fitness influencers; healthy lifestyle; body representation; nutrition; gender differences; social media impact; motivation; inspiration; netnography

Introduction and objectives

Fitness on Instagram has gained widespread popularity, particularly strengthening during the pandemic period. Through millions of posts available via hashtags such as #fit, #fitness, #fitspiration, #fitgirl, #nopainnogain, internet users have access to prolific information to enhance their practices. Beyond these hashtags, users can also find answers to their questions by following "fit" influencers. Some of these fitness influencers have qualifications related to their activities (coach, sports trainer, former competitor), disseminating their knowledge through their posts. Users can benefit from the practical experience of these influencers in various aspects related to fitness practice (trying supplements, specific workout routines, dietary plans). Embodied as role models within this practice and having successfully forged strong bonds with their communities, they are now essential figures in the industry. While numerous studies have examined fitness practices, few have explored the specifics of digital fitness, especially focusing on influencers. Existing literature emphasizes that gender plays a predominant role, particularly concerning body image, practice objectives, and dietary habits. Therefore, this research aims to identify the major differences between male and female fitness influencers on these subjects.

Literature review

Fitness : Clarification and Origin : Fitness encompasses a variety of activities, ranging from collective sports practices (gymnastics, body pump, crossfit, RPM) to more individual practices (weightlifting). This diversity of sports practices makes it difficult to provide a universally accepted definition of the term "fitness," as there is no scientific consensus (Vallet, 2022). Despite this apparent heterogeneity in practices, common goals are shared: the pursuit of a better physique, improved health, or enhanced performance. The fitness movement began to develop in the United States in the 1960s and 1970s, during which a shift in mindset occurred, transitioning from a society based on collectivism to the development of more individualistic aspirations, focused on self and personal success (Vallet, 2022). Individuals gradually became more responsible for their choices, leading many to reconsider their daily practices, including sports. Fitness became a perfect response to these new concerns, with the idea of self-fulfillment, becoming "a better version of oneself." This was accompanied by the concept of the ideal body, closely linked to fitness, combining the pursuit of aesthetics, performance, as well as health and youthfulness (Sassatelli, 2010). In recent years, fitness has seen a significant surge in popularity among the population, evidenced by the success of dedicated applications and a significant increase in the consumption of fitness content on social networks, particularly during the Covid period (+266%, Creuset, 2022). The numerous gym openings throughout France¹ illustrate the importance of this trend, which continues to grow even though the pandemic has ended.

Fitness Influencers: Key Players in the Industry : This highly favorable context for physical activity has benefited fitness influencers on Instagram. Through their posts, they convey inspiring and entertaining messages, and for the most influential ones, they gather communities

¹ In 2022, 4.7 million French people held a gym membership, representing a 16% increase compared to 2021, according to a study by Deloitte and EuropeActive.

of several million followers (Stollfuß, 2020). According to Lou and Yuan (2019, p. 56), influencers are "online personalities with a large subscriber base, spread across various social media platforms (YouTube, Instagram, Snapchat, personal blogs), who have an influence on their audience." Influencers, due to their status, hold a certain aura among their subscribers, which significantly impacts perceptions of expertise, proximity, and trust (Sicilia and López, 2023). Their relationships, based on sharing intimacy, also make them particularly effective in product recommendations (Li and Peng, 2022). However, the relevance of the information they provide should be considered. A recent study highlights the dangers of spreading inaccurate nutritional information in fitness-related content (authors). The fitness trend is also evident through the numerous dedicated hashtags on Instagram, among which the hashtag #fitspiration, a combination of "fit" and "inspiration," has been the subject of several studies (Carrotte et al., 2017; Prichard et al., 2020). In this regard, a study conducted by Curtis et al. (2023), focusing on the 15 most recent posts from the top 100 "fitspiration" Instagram accounts, highlights that the account owners are predominantly women (59%), aged 25-35 (54%), of Caucasian ethnicity (62%), and from the United States (79%). Furthermore, 54% of the accounts are owned by qualified individuals (sports trainers, coaches, etc.). Posts related to these hashtags have positive effects on internet users (motivation, inspiration, healthy lifestyle), but also raise numerous questions regarding their negative effects (social comparison, links to eating disorders). The issue of body ideals is also raised, as fitness influencers serve as role models for internet users. In this regard, a study pointed out that male fitness influencers tend to post more content related to health on Instagram, while women tend to post more content highlighting their bodies (Gültzow et al., 2020).

Body Appearance, Nutrition, and Gender Impact: The impact of gender on body representations is well-documented, thanks in large part to numerous sociological studies that have provided various theoretical insights. These studies emphasize a very close connection between body ideals and dietary practices. In general, gender acts as a major differentiating factor, consciously or unconsciously guiding individuals toward opposing body ideals (Boyd and Murnen, 2017 ; Grogan, 2021). While the female ideal is often represented as thinness, the male equivalent tends to be more muscular and bulky. These ideals appear to be deeply ingrained in the population, with women being more concerned about issues of thinness than men (Lavrilloux and Masson, 2018). Conversely, nearly 33% of men report feeling "too skinny"². Body ideals then have an impact on how individuals approach health and nutrition. In the era of the "appearance society" (Amadiou, 2016), women are more sensitive to issues related to health and nutrition (Lavrilloux and Masson, 2018). This phenomenon is likely linked to the strong societal pressure that exists among this population, particularly concerning beauty standards. Men, on the other hand, experience less pressure, but it is on the rise, as evidenced by an analysis of the media in recent years (Clauzel and Guichard, 2021).

Methodology

Choice of Field: This study takes place in a digital context and explores the content of fitness influencers on Instagram. This social media platform was chosen for its leading position in the digital landscape, particularly in the realm of influencer marketing. It is also the platform where many fitness influencers share their daily routines, exercises, and advice. On Instagram, there are numerous hashtags related to fitness (#fit, #fitness, #fitgirl, #fitspiration, #nopainnogain, #trainhard), some of which accumulate tens of millions of posts. Our comprehensive and

² OpinionWay Survey, 2020

immersive approach aims to deeply explore the nature of this content in order to better understand the meaning attributed to it by the actors involved. We opted for netnography (Kozinets, 2019), adhering closely to the approach we intended to adopt. Investigating in a digital context requires necessary "methodological tinkering" to adapt processes perfectly to the research objective (Millette et al., 2020). For this study, we drew inspiration from the phases recommended by Kozinets, adapting them to our needs (Appendix 1).

Corpus Construction : The phase of identifying influencers began by exploring all possible digital traces (websites, press, social networks) to identify Instagram accounts of fitness influencers. These traces allowed us to identify major fitness influencers. Then, through an iterative process, the database of influencers was enriched by recommendations of similar accounts by Instagram's algorithm. Three selection criteria were used for *corpus* construction. To study accounts with visibility and a direct link to fitness, we selected influencers who had surpassed the status of nano-influencers (<10k followers) and whose description included the words "coach," "influencer," or "fitgirl." In total, 27 female fitness influencers and 28 male fitness influencers were selected in the French-speaking sphere. All these accounts were documented in an Excel spreadsheet, each accompanied by various identification details (account name, URL, number of followers, number of posts), facilitating the subsequent research process.

Data Collection : This phase spanned over 6 months. The goal was to collect posts related to the portrayal of the body, whether it be exercises, advice, challenges, or collaborations. Posts related to other topics were not included (private life, collaborations with non-fitness brands, surveys, humorous content). Stories were not collected due to their ephemeral nature (deleted within 24 hours). In total, 2,481 posts were collected (1,545 from female influencers, 936 from male influencers) and integrated into a *Nvivo* project file, the reference software for this type of data.

Data Analysis : This phase involves coding the posts into categories in two steps. To simplify data processing, videos and images were considered as a homogeneous entity, conveying meaning, and analyzed interchangeably. Given the very large number of collected videos, they were converted into image captures to streamline the analysis. Initially, a preliminary inductive coding was carried out through a floating reading of each post. Subsequently, a reorganization of codes was performed by grouping the codes generated during the first coding into larger categories. Some codes from the initial coding, which were deemed too infrequent or irrelevant, were eliminated. In the end, four categories emerged: body image, nutrition, physical exercises, and social dimension.

Findings

Stereotyped Body Ideals: One notable difference among content creators is the presence of gendered and almost exaggerated body representations. Male and female bodies do not adhere to the same logic, criteria, and ideals. Among female influencers, the ideal body is perceived as thin, athletic, with a flat stomach, often highlighted through specific outfits and poses that accentuate their physique. The body is associated with toning, flexibility, and agility. Many female influencers offer stretching, flexibility, or yoga sessions. "Cardio" sessions are also a central element of their practice, performed regularly and intensively with the aim of weight loss and body refinement. In contrast, male influencers focus on "bulking up." The male body should appear massive, muscular, and voluminous. Body representations are linked to strength,

power, and endurance. Exercises are presented to strengthen the body and become stronger. The concept of "progressive overload," common in bodybuilding, is often mentioned. In a hypertrophy³ context, it involves progressively increasing the weights lifted during exercises in each session to make progress. This is one of the fundamental concepts of bodybuilding, which paradoxically is rarely mentioned by female influencers. Although there are marked differences in body representations, a similar relationship with temporality is observed. During the winter, the body is less subjected to strict "fitness" regimes. It is as summer approaches that the body is put to the test. Fitgirls offer training programs to achieve the "summer body" or the "bikini body," while male influencers propose "cutting" to eliminate fat and preserve maximum muscle mass.

Hedonism and Health vs. Pragmatism and Performance : On Instagram, fitness content is closely linked to content about nutrition. Achieving the desired body inevitably requires an adjustment of dietary practices. Influencers act as prescribers, offering plates, recipes, and even dietary programs to work towards the desired goal (losing weight, gaining muscle, toning up). Since body representations are closely tied to nutrition, the way it is approached differs between men and women. Among female influencers, nutrition is presented as "healthy." It is portrayed as a daily ally, promoting well-being and good health. Beyond the descriptor, differences also arise in terms of meal composition. Women pay attention to presenting aesthetically pleasing plates, with food arrangement considered a prerequisite for healthy eating. In other words, the "healthy" experience begins with visual appeal, awakening the senses for eating. In contrast, influencers emphasize a more pragmatic, utilitarian, and performance-oriented approach to nutrition. The pursuit of plate aesthetics is nearly nonexistent. Nutrition is seen as a lever to achieve one's goals, with a limited focus on hedonism. The goal is to meet the desired "macros"⁴ ratio to work towards the desired body. Meals are considered a mandatory step in the transformation process. As this process can appear restrictive, some influencers suggest consuming six fixed-time meals per day. Nutrition is straightforward and more "raw" than among women, with cooking reduced to assembling minimally processed foods, avoiding deviations (salt, sauce, cheese, bread, etc.) at all costs (appendix 2).

Preserving Health vs. Pushing Natural Limits : The question of doping in their practice is also divisive between female and male influencers. For female influencers, this issue simply does not seem to exist, as they do not allude to these products. Male influencers are more open on the subject. Some of them use doping products to achieve these physical ideals. A jargon has emerged around this practice, distinguishing between those referred to as "juiced" (the doped) and the "natties" (the non-doped or natural). These terms are also used to circumvent social media algorithms that automatically ban terms directly related to illegal or dangerous substances. Doping products are referred to as "fruits" to circumvent censorship on social media platforms. This is a workaround strategy used by influencers sponsored by supplement brands to avoid losing their contracts by discussing doping too directly. Doping products are used to enhance the intensity of workouts, strength, endurance, recovery, hypertrophy, protein synthesis, with the aim of surpassing the body's so-called "natural" limits.

³ Hypertrophy of a muscle refers to an excessive increase in its size

⁴ Through nutrition, influencers aim to achieve their optimal macronutrient and micronutrient ratios for progression. For practicality, they use the term "hitting the macros."

Self-Centered vs. Competing with Peers: The way of approaching one's fitness content on the feed differs between women and men. Women's posts are more centered on the individual, inviting their audience to elevate themselves in areas such as sports, mental health, personal development, body, and health. Few interactions between fitgirls from the same circle are observed outside of "official" events that bring together multiple influencers from the same brand. Challenges are more focused on the body (e.g., "summer body" programs in X weeks). On the contrary, male influencers often engage in collaborations with their peers, not necessarily for commercial purposes. These collaborations are shared in a spirit of camaraderie and competition. Influencers showcase themselves and "test" themselves on various sports exercises through challenges (push-ups, pull-ups, bench press). This ambiguous relationship, between "friendly" friendship and rivalry, is characteristic of male content. Thus, female fitness seems to revolve around practices of introspection and individuality, while male fitness is presented through practices of externalization, group dynamics, and competitiveness.

Smile and Well-Being vs. Concentration and Toughness: Influencers must strike a delicate balance between creating content that appears spontaneous while having thought out every element of staging in advance (location, lighting, setting, attire, expression, posture). The theatricalization of spontaneity and the fake candid shot are approached differently between female and male influencers. Women tend to represent themselves positively, frequently using smiles. The representations conveyed evoke well-being, gentleness, kindness, and positivity. Male fitness influencers prioritize a portrayal that highlights the most demanding aspects of their sports practice. Smiles are rarely present, replaced by serious, concentrated expressions that illustrate deep commitment and determination, inviting the viewer to take on the challenge. This representation can be interpreted as an aspiration for performance, brute strength, and endurance : central elements of the male body aesthetics valued in fitness culture. Male influencers like to contrast their content by regularly using a lighter, even humorous tone. The use of humor is much less prevalent among women.

Discussion, Conclusion, and Limitations

This research highlights fundamental and gendered differences in the portrayal of the body by fitness influencers. While sociological studies have previously noted significant differences between men and women in their relationships with their bodies and food, the "social media effect" appears to exacerbate these phenomena. Promoting individual freedom and self-fulfillment through well-being, health, and the body, influencers paradoxically end up perpetuating body ideals and stereotypical practices. These contents may serve as a motivational lever for some, pushing them to surpass themselves. However, for a more vulnerable audience, they can contribute to an often unattainable quest for a certain body ideal. This research has certain limitations. Our study exclusively focuses on influencers who have reached a certain level of notoriety, namely those with more than 10,000 followers. Further research could explore dynamics specific to nano-influencers. Additionally, our study is limited to the French-speaking context, implying a certain cultural homogeneity. Expanding the sample internationally could provide an additional framework for understanding potential cultural differences in body and dietary representations.

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Appendix

Description of the process
<ol style="list-style-type: none"> 1. Reflection on the research design and teamwork tasks 2. Selection of a netnographic approach 3. Selection of the Instagram platform
<ol style="list-style-type: none"> 1. Discovery of major fitness influencer accounts through digital trace exploration 2. Selection of criteria for choosing influencers to create the <i>corpus</i> 3. Iterative exploration to discover new accounts 4. Finalization of the <i>corpus</i> of 55 accounts in the form of an Excel file
<ol style="list-style-type: none"> 1. Random allocation of the 55 selected accounts among researchers 2. Daily immersion for 6 months on the selected accounts 3. Data collection: posts (images and videos) 4. Integration of data into the <i>NVivo</i> software
<ol style="list-style-type: none"> 1. Aggregation of the collected data 2. Floating data reading and initial inductive coding 3. Reorganization of coding: removal, modification of some codes 4. Creation of 4 categories: body relationship, nutrition, physical exercise, social dimension

Appendix 1 : Research Phases and Processes

	Female fitness influencers	Male fitness influencers
<i>Body Representations</i>	Thin Athletic Flexible Agile	Powerful Voluminous Muscular Enduring
<i>Diet Characteristics</i>	Aesthetic Vegetal Light Indulgent	Convenient Quick Caloric Complete
<i>Content Logic</i>	Interiorization	Exteriorization

Appendix 2 : Gender differences between female and male fitness influencers