THE POWER OF BEAUTY OR THE TYRANNY OF ALGORITHMS. HOW DO TEENS UNDERSTAND BODY IMAGE ON INSTAGRAM?

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1. INTRODUCTION

Body image has traditionally been defined as an individual cognitive construction related to the thoughts, feelings, and emotions connected to one's body (Cash, 2012). Scientific literature associates body image construction with the presence of internal and external factors, including the dissemination of media imagery (Halliwell & Diedrichs, 2012). As digital media has become a popular form of communication, new media literacies are needed to counterbalance its compelling effects among youngsters. Social Media (SM) literacy is considered a critical thinking resource to empower young individuals to analyze, evaluate, produce and participate in SM environments (Tamplin *et al*., 2018; Thoman & Joll, 2003).

The leading role of digital communication in adolescent socialization makes SM one of the main promoters of body image pressure and dissatisfaction. Different studies suggest that teenagers aged 12-19 have increasingly become heavy users of these platforms (Coyne *et al*., 2020; Rideout & Robb, 2019), connecting their SM use with the consumption of body imagery (Cohen *et al*., 2017; Eckler *et al*., 2017). Although there is not a consistent agreement on the size of its impact, the extended use of SM is correlated with the increasing concerns for body appearance, the development of eating disorders, and body image

disturbance (Fardouly & Vartanian, 2016; Griffiths *et al*., 2018; Meier & Gray, 2014).

In comparison to traditional media, the usage of SM platforms has been connected to the learning of body literacies: the transference and acquisition of narratives that shape adolescents' values, beliefs, and attitudes towards the body. Different factors influence adolescents' learning of body literacies as the time of exposure, internalized values, or the context of prescription (Diedrichs, 2011; Holmqvist & Frisén, 2012; Spurr *et al*., 2013). Most scientific research in media and body image has long attempted to explain the role of SM in body image construction by exploring the nature of its content and effects (Kleemans *et al*., 2018; Retallack *et al*., 2016). To a lesser extent, studies have focused on the study of viewers' literacy skills to understand the SM environment and the technological factors that mediate its functioning.

In the current context of digital communication, getting to know the complex structures that mediate the dissemination and consumption of body image discourse and imagery should be observed as an integral competence to enhance knowledge and empower critical thinking of media (Buckingham, 2010; Ferrés & Piscitelli, 2012). Media literature has explored different factors that can affect body image perception in SM and have provided interventions to overcome them. However, there is a tendency of overlooking the role of artificial intelligence (AI) mechanisms as mediators in such platforms. This study aimed to explore adolescents' understanding of body image in the SM platform Instagram and their knowledge of AI algorithms as disseminators of body imagery.

1.1. Body image and social media literacy

Compared to other SM, Instagram offers a highly visual environment where users primarily create and share content mostly entwined with trending topics and the use of caption texts. Most popular posts on this platform include body image content portrayed in selfies, full shots, tight shots, and the use of hashtags that offer an overall description. Several features make Instagram a focus appearance platform. Cohen *et al*. (2019) highlight the use of body images to hold the attention of

viewers while Caldeira & Ridder (2017) underscore the potentiality of this platform to redeem body values.

Instagram has turned a mirror for appearance comparison, especially among teenagers who tend to compare themselves with the image of popular peers and celebrities (Perloff, 2014; Ridgway & Clayton, 2016). It has therefore been considered a factor of body dissatisfaction and body disturbance in both males and females (Casale *et al*., 2019). Negative effects are more likely to appear among teenagers who have internalized body image ideals and present high levels of appearance comparison (Anixiadis *et al*., 2019; Feltman & Szymanski, 2018).

Existing research has shown that a better understanding of social media imagery can decrease its negative effects on young people's body image (Gordon *et al*., 2020; MacLean *et al*., 2016). The strengthening of Social Media Literacy (SML) skills has been considered a potential factor to foster adolescents' abilities to critically evaluate the content and the risks related to its use. SML encompasses "the tasks of decoding, evaluating and creating communication in relation to media *qua* representation (text, image, platform, device, etc.) and *qua* social interaction (relationships, networks, privacy, anonymity, etc.)" (Livingstone, 2014: 286). In this line, the training of SML can enhance the transference and acquisition of multiple literacies (e.g., digital literacies, visual literacies, health literacies, etc.), including those that shape values, beliefs, and attitudes towards the body image: *body literacies* (Sánchez-Reina, 2020).

Analyzing SML should observe different dimensions and components to better understand the mediating role of platforms like Instagram in body image construction. Based on Hague & Payton's sketch of digital literacies (2010), we further define a set of skills to be considered in the training and the exploration of SML and body image literacies (Table 1).

Table 1: Social media literacy skills to enhance the understanding of body image

Critical thinking and evaluation: This literacy includes the use of reasoning skills to question, analyze, and scrutinize content disseminated in SM. Concerning body literacies, this skill fosters the ability to critically evaluate images and narratives focused on body appearance, bodily ideals, and body pressure narratives.
Creativity: It fosters the production of body image-related content to promote critical consumption. By producing their own content, youngsters may have a better knowledge of the nature of images, purpose, and intent.
Collaboration: It targets youngsters to actively participate in the construction of a collective view of body image in the SM environment. Collaboration skills of debate and cooperation can enhance critical thinking and decision-making when performing tasks such as curating content or being exposed to body image threats.
Functional skills: It targets the technological aspects that mediate the production, dissemination, and consumption of content. This can be observed as transversal literacy which addresses knowing the basic functions in content production but also being aware of how SM networks work and the technological mechanisms behind them.
The ability to find and select information: It is related to the awareness of thinking carefully about the content youngsters find on social media. it addresses going beyond simply checking the reliability of the information or the nature of images; it urges to fully scrutinize the content, the context of production, and the producers' intent.
Effective communication: It involves the awareness of creating messages; the ability to identify the audiences, languages, and representations to communicate ideas with clarity and efficacy. Training this literacy might enhance youngsters' critical thinking and attitudes when curating focused appearance content analyzing the target, aims, and effects of their communication.
Cultural and social understanding: It fosters youngsters' awareness of body image content with a natural and neutral perspective of culture and society. It involves being able to understand the sociocultural practices around their creation, for example, the societal values and beliefs.
Protection and safety skills: It involves teaching, training, and guidance of skills to think critically about the SM practices that may represent risks or threats for body image wellbeing. The literacy fosters coping skills to deal with deceitful and damaging content as well as to reflect on the risks in case they feel engaged to negative attitudes and practices.

Source: Authors' elaboration based on Hague & Payton (2010)

1.2. THE ROLE OF ARTIFICIAL INTELLIGENCE IN BODY IMAGE PERCEPTIONS

SML has demonstrated to be an effective critical thinking resource to deal with threatening content and its effects on body image (Micallef *et al*., 2021; McLean *et al*., 2017). These types of interventions provide participants with examples and information of how these phenomena can occur within SM platforms and often equip them with SML skills to protect themselves against them. Although SML skills may give teenagers the chance to discriminate deceitful content in SM, this fact

does not mean they can control all the content they receive on it. Artificial Intelligence (AI) algorithms play a crucial role in SM platforms as they can manipulate the content, and information adolescents receive which in some cases may be highly biased (Caldeira & Ridder, 2017).

Back in 2009, AI algorithms made their first appearance in search engines by analyzing user data and providing users with content personalized to their interests (Pariser, 2011). SM platforms utilize this kind of algorithms to provide users with content that is relevant to them with the goal of keeping them interested and motivated to continue using the platform. These algorithms are also known as recommender systems. The success of a recommender system is measured by whether the users are interacting with the content the algorithm provided. If a user further interacts with the recommended content, then the algorithm continues to provide relevant items. There are various techniques that are used to personalize the content that users receive, the most frequently used ones are the ones of content-based and collaborative filtering recommendation systems. Content-based recommendation algorithms analyze the content of the data uploaded by users, whereas collaborative filtering makes recommendations based on similarities with other users. With the volume of content that exists in SM platforms, it is needed to introduce algorithms that filter content based on each user's needs. However, the use of recommendation algorithms can restrict the diversity of content that a user is exposed to and possibly create a personalized bubble for each user (Koene *et al*., 2015).

These personalized bubbles are also known as filter bubbles. Filter bubbles describe the effect of the decrease of content diversity at the individual level due to the algorithmic bias based on previous interactions. SM users, under the effect of a filter bubble, receive content that matches their likings and beliefs and they are often unaware that more diverse content and opinions exist. The filter bubble effect connects with an already known topic found in traditional media which is the fragmentation and biases of information. Managing large masses of information requires the simplification of data by filtering. As a consequence, this can lead to the production of bubbles which delimits the size of reality and has effects on users with the polarization of ideas. As

the simplification of information occurs in real life also the role of data processed by machines can affect our interactions by enabling recommender algorithms to expose us to specific content (Goldman, 2008). This potentially leads to users perceiving a single perspective of reality through their digital interactions and constraining the diverse interpretations or opinions related to a topic or a message (Pariser, 2011). SM users are often unaware that their digital interactions can result in a personalized bubble, and this could be due to them not being aware of what filter bubbles are and how to take action against them (Burbach *et al*., 2019). Being under the influence of a filter bubble promoting a specific body type could lead to negative outcomes as the exposition of specific body types to users through time can change their perceptions of a healthy body (Tiggeman & Slater, 2017; de Vries *et al*., 2016).

Therefore, we propose that SML skills should not only depend on skills of understanding the basic functions of SM or different occurring phenomena but also raise awareness of how algorithms that control the content we receive within these platforms work.

2. RESEARCH AIMS AND GOALS

This study aimed to explore adolescents' understanding of body image in the SM platform Instagram and their knowledge of AI algorithms as disseminators of body imagery. To fulfill the research aim, three specific goals were primarily set:

> SG1. The study of adolescents' attitudes towards body image in social media
>
> SG2. The analysis of adolescents' decoding of disseminated body imagery in Instagram
>
> SG3. The exploration of adolescents' knowledge concerning the filter bubble phenomenon during the pre- and post-workshop interventions.

3. METHOD

3.1. RESEARCH SAMPLE AND DESIGN

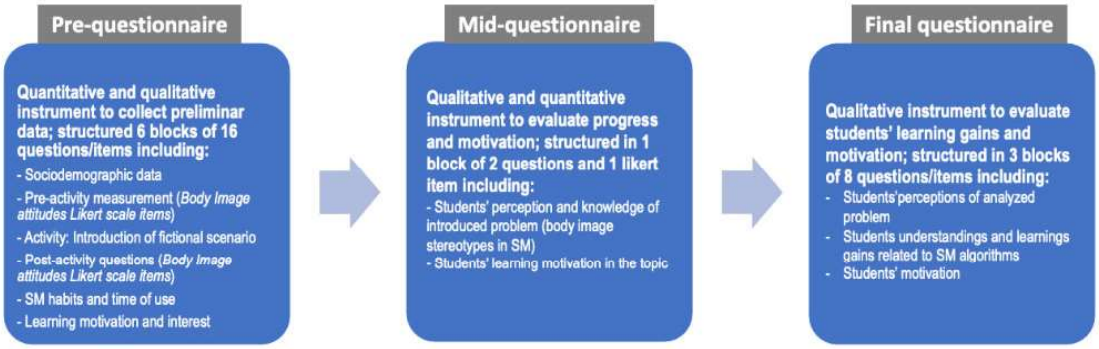
This exploratory study utilizes information from 19 female students participating in two media literacy workshops virtually conducted during the first quarter of 2021. The mean age of participants was (Mage = 18.5). The mean experience of SM use described by participants was valued as 3.07 (Average Experience) while the time of daily SM exposure was self-assessed as M = 2.8 hours daily.

The study was a mixed-method design supported in research workshop methodology (Ørngreen & Levinsen, 2017). As a pilot study, we managed a convenience sample prioritizing the ecological validity of the study in similar settings scenarios. Participants were recruited as they volunteered to participate in workshops promoted by two collaborative institutions. All students consented to participate in the study by signing a consent form that explained the nature of the activity. Participants under 18 years old also provided the authorized consent of their legal guardians or parents.

3.2 INSTRUMENTS AND MEASUREMENTS

The research design was embedded in a case study that introduced participants to a simulated SM scenario with the use of an activity sheet. As part of the workshop activities, participants were requested to perform different tasks and respond to three short questionnaires: a pre-questionnaire to evaluate the conditions before the workshop, a mid-questionnaire to evaluate progress and understanding of themes, and a final questionnaire to assess the results of the intervention (Fig. 1). Questionnaires were expressly designed for the purpose of this study and introduced quantitative and qualitative components which aimed to evaluate both the variables of the study and student's motivation and interest in the workshop. Finally, to complete the information not provided by the questionnaires, we conducted a group discussion to recap students' thoughts and considerations at the end of the sessions.

Figure 1. Conducted questionnaires as part of the workshop intervention.



Source: Authors' own elaboration

Both questionnaires and group discussions included the measurement of different criteria. For the purpose of this study, we focused on three variables:

a) Attitudes towards body image in Instagram. This variable was first observed through a quasi-experimental design at the beginning of workshop intervention. To observe the variable, we implemented a scale to measure the attitudes towards the features that make appealing an Instagram profile (*Age, Sex, Profile Picture, Popularity, Number of Posted Pictures, Occupation, Body Appearance, Dressing Style, Beliefs and Ideas, and Personal Interests*). The measurement of the scale was included within the pre-questionnaire and was observed in two different moments before and after the presentation of the fictional scenario (*The Real Beauty Challenge)*. Attitudes were measured with a 3-point Likert scale instrument (1. Not important at all 2. Somewhat important 3. Very Important).

b) Decoding of body image in Instagram: This variable was observed through a qualitative exploration during workshop activities and final group discussion. Students were asked to provide descriptions, perceptions, and judgments of the body imagery they see on Instagram.

c) Knowledge of the filter bubble phenomenon: This variable was observed through the qualitative analysis of responses to open questions

provided by questionnaires and the individual interventions in group discussions. The analyzed dimensions included students' knowledge of the technological mechanism that influences SM interaction and the dissemination of a type of body imagery.

3.3. Procedure

This research intervention took place in two workshop activities related to the Filter Bubble effect on Instagram. Both workshops took place virtually, followed the same structure, and were limited to 90 minutes sessions. Workshops were structured in two sections: a first part to conduct the quasi-experimental design and a second section to make the qualitative exploration.

The first part of the study took place during the preoperative phase of the workshop and consisted of the presentation of a fictional story whose main character asked participants for help to nominate some profiles for the #RealBeautyChallange. As part of the activity, participants firstly filled in the pre-questionnaire to register their attitudes before and after the fictional challenge. They also went through the qualitative questions and Likert items to describe their SM habits and learning motivation. Right after, the teacher-researcher introduced the workshop presentation (10 mins.) to prepare the participants for the second part of the study: the qualitative analysis. As part of the second section, participants were introduced to a reflective analysis by providing them a mid-questionnaire and a mini-game activity. As a closure activity, the researcher conducted participants to group debate. Finally, the post-questionnaire was administered and participants logged out of the session. All questionnaires were self-administered in google forms while group discussions were recorded and transcribed for its analysis.

3.4. Data analysis

Quantitative data from questionnaires was cleaned and coded for its analysis in SPSS (v.25) software. A t-test was computed to observe the mean differences in the assessment of the attitudes to body image before and after the simulated activity. Qualitative data derived from questionnaires and focus groups was exported to Atlas.ti (v.9) software. Deductive analysis was applied to manage primary coding. Memos and networks were created to describe the analysis.

4. RESULTS

4.1. Attitudes towards body image in Instagram

Preliminary measurement of the features that make appealing an Instagram profile to be nominated in the simulated contest (#RealBeautyChallenge) showed that non-physical traits such as beliefs and personal interest were mostly rated as very important factors (56.3% and 50.0%, respectively). In contrast, factors such as body appearance (68.8%), sex (75.0%), and popularity (56.3%) were mostly considered not important. Post activity assessment (once students saw and read the participating profiles) revealed that girls nominated the candidates mostly considering the visualized and described aspects as the profile picture (81.3%), description of occupation (62.5%), and interests (56.3%) were rated as very important. Conversely, factors such as the user's popularity (68.8%) and the number of posts (75.0%) were observed as not important to nominate the candidate. Other factors such as body appearance and beliefs remained equally distributed (Table 1).

Table 2. Assessment of appealing features during pre- and post-activity

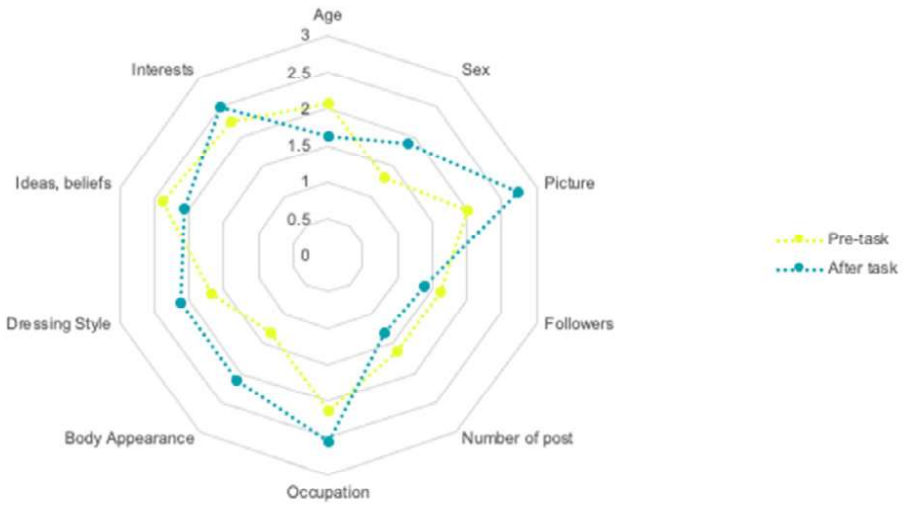
	Pre-activity				Post-activity			
	Not important	**Somewhat Important**	**Very Important**	***M***	**Not important**	**Somewhat Important**	**Very Important**	***M***
	% (n)	**% (n)**	**% (n)**		**% (n)**	**% (n)**	**% (n)**	
Age*	25.0 (4)	43.8 (7)	31.3 (5)	2.06	50.0 (8)	37.5 (6)	12.5 (2)	1.63
Sex*	75.0 (12)	18.8 (3)	6.3 (1)	1.31	31.3 (5)	50.0(8)	18.8 (3)	1.88
Picture Picture**	25.0 (4)	50.0 (8)	25.0 (4)	2.00	6.3 (1)	12.5 (2)	81.3 (13)	2.75
Popularity	56.3 (9)	25.0 (4)	18.8 (3)	1.63	68.8 (11)	25.0 (4)	6.3 (1)	1.38
Number of Posts*	43.8 (7)	50.0 (8)	6.3 (1)	1.63	75.0 (12)	18.8 (3)	6.3 (1)	1.31
Occupation*	25.0 (4)	37.5 (6)	37.5 (6)	2.13	6.3 (1)	31.3 (5)	62.5 (10)	2.56
Body Appearance**	68.8 (11)	31.3 (5)	0 (0)	1.31	25.0 (4)	37.5 (6)	37.5 (6)	2.13
Dressing Style*	43.8 (7)	43.8 (7)	12.5 (2)	1.69	18.8 (3)	50.0 (8)	31.3 (5)	2.13
Beliefs & Ideas	18.8 (3)	25.0 (4)	56.3 (9)	2.38	31.3 (5)	31.3 (5)	37.3 (6)	2.06
Interests	25.0 (4)	25.0 (4)	50.0 (8)	2.25	6.3 (1)	37.5 (6)	56.3 (9)	2.50

Statistical significant differences. **p value* < .05; ** *p value* < .01

Mean comparison of the appealing features in the pre- and post-activity revealed significant statistical differences for almost all traits. As illustrated in Figure2, features associated with the physical appearance such as profile picture (t=-3.87(15), p <.01), body appearance (t=-4.33(15), p <.01), and dressing style (t=-2.15(15), p <.05) showed increased mean values during the post-activity. In contrast, factors such as character's

popularity, beliefs, and personal interests decreased their mean values. T-tests did not reveal statistical differences for those factors.

Figure 1. Mean comparisons for pre- and post-activity



Source: Own Elaboration.

4.2. Decoding body image in Instagram

Qualitative measurement of the attitudes towards body image let us observe in detail some of the aspects that influenced participants' decoding and mediated their perceptions. These critical reflections turned around three general issues:

Image purpose: On the one hand, participants' appreciation of imagery was connected with understanding the reasons for a user to post and share his/her image content. In this line, it was possible to observe the presence of positive attitudes as students associated the image content with a professional background and therefore justified the fact of showing off the body. *"He shows this way in his profile as he does exercise, he's a fitness trainer"* (participant 3). Conversely, the professional context was also a reason for criticism, especially when images become associated with health issues, as participant 15 implied, concerning the fitness trainer profile *"I don't like these images… they always hide something, they want you to believe you can look like that because that's the business"*.

Image editing: In line with the fact of *'hiding things'*, image editing was considered an element of judgment. Although aesthetics and composition seem to impress the participants' perceptions *"It's a good picture. Excellent quality, light, perfectly edited"* (participant 8), image editing was strongly criticized as participants pointed out filters as manipulating mechanisms to curate content and lives, a phenomenon which contrasts with the idea of natural bodies and realistic beauty.

> *"Most of the SM images are fake. People always use filters and editing tools, therefore, nothing you see is real. SM users choose the attractive part of their lives to be shown".* (Participant 7).

Connected values: Naturality in images not only was helpful to positively assess the character's profile but also to create narratives and counternarratives that describe beauty beyond the physical body appearance. Such descriptions were based on both personal assessment and societal values. Participants connected the transmitted/decoded attitudes to the character's description and even the contexts where they appear by addressing their own cultural background values. *"Damir can be nominated as real beauty as it seems he enjoys much of nature"* (participant 11) *"Belen looks more natural, self-centered with positive ideas and beliefs. She deserved more to be a #realbeauty*" (participant 13).

4.3. KNOWLEDGE OF THE FILTER BUBBLE PHENOMENON

Preliminary exploration of the mediating factors that influence the dissemination of beauty imagery in Instagram did not report any insight connected to the role of technological mechanisms such as AI mechanisms. On the contrary, most participants' explanations were associated with the role of society and the mass media arguing that social media platforms only reproduced the already normalized body values.

> *"Most of the images we see in social media are very similar to those previously presented by the media or television advertising. We've already known beauty stereotypes. Social Media only reinforces that idea".* (Participant 13).

In this vein, just as media advertising, Instagram images are perceived as persuading content that reinforces body stereotypes assuming that showing the body under the stereotyped canon is part of the game rules to be accepted in both the SM and society.

> *"Images influence people, as they follow what they see on social media. They imitate the same posture and gestures to look slimmer and get the likes"* (Participant 4).

> *"I think as we follow these images, we get used to these standardized body shapes but we just reproduce the ideas coming from society"* (Participant 8)

Based on the introduced fictional story, most participants agreed that individual choice was the main factor to be engaged with these images: the personal aspiration and inspiration in characters' appearance were perceived as the main reason to be bombed out by beauty images in the social media *"This is what Jana likes" "She only see the images she's interested in" "She's into appealing images for motivation".* The emerging insights as well as the little knowledge concerning the AI mechanisms helped us to guide the teaching intervention and assessed their comprehension.

The final group discussion (post-workshop intervention) allowed us to identify the integration of instructed knowledge to explain the case study. Disseminated content and keywords were used by participants to describe the situation they had observed in the fictional story.

> *"Now I can see that our personal interest influences the images we see but also our social media activity. If you like edited images, the app will continue showing you similar images."* (Participant 16).

> *"Besides the liked images, the search history can also be a factor. Mobiles can memorize our online activity."* (Participant 13).

> *"The problem is that, similar to Jana, we all can be inside a filter bubble. A bubble that modifies most of the things we see."* (Participant 7).

Although the role of SM algorithms and the filter bubble effect was integrated with the final reflections and discussion, a strong association between the content and the users' personal criteria for selecting (liking) images was emphasized. Moreover, cognitive biases were placed

as main predictors to see images and not the algorithms. Many external factors were mentioned to be reasons; however, the individual choice was observed as the patterns to be changed while 'Self-acceptance' was pointed out as a protection factor.

> *"Jana needs to have a broader criterion on the things she sees; like diverse content; follow different profiles; avoid liking every picture she sees."* (Participant 11)
>
> *"Everybody will see what they want to see. A single picture won't affect you nor define yourself but your self-esteem will."* (Participant 8).

5. DISCUSSION

Since SM have turned into popular forms of interaction among youngsters, visual literacies have taken an unprecedented role in the construction of body image and body identity. It is true that the influence of media on people's body image is not a novel issue, however, in comparison to the traditional media, SM platforms like Instagram provide users with content and features that modify their body literacies (values, beliefs, and attitudes towards the body). In this line, the present pilot study has aimed to explore adolescents' understanding of body image in Instagram as well as their knowledge of AI algorithms as technological mechanisms that mediate the dissemination of body imagery.

Concerning the study of adolescents' attitudes towards depicted body image in this SM platform, the quasi-experimental study revealed that physical body appearance was an appealing factor to interact with images. Although participants' notions of the attractiveness of users were primarily set in abstract features such as character's ideas, beliefs, and interests, students' choices revealed that #RealBeauty nominations were mostly based on features appealing to the body, as for example, the characters' appearance or the profile picture. We recommend observing this finding not as a modification of body attitudes due to the introduced stimuli (images or descriptions) but as evidence of the internalized body ideals. As in prior literature (Diedrich *et al*., 2011; Holmqvist & Frisén, 2012; Trekels & Eggermont, 2017), this study shows that in spite of the presence of deconstructing narratives such as

body positivity or post-feminism (Caldeira & Ridder, 2017; Retallack *et al*., 2016), much of the body narratives are still mediated by the cultural consensus. Adolescents' judgments are therefore still influenced by the power of societal factors which delimit the meanings and frontiers of body image construction.

Notwithstanding that situated learning practices such as the conducted fictional activity may trigger stereotypes to negotiate cultural meanings, something very positive about this practice was the opportunity to expand and explore dominant narratives. As observed in the qualitative analysis of adolescents' body image decoding, participant girls seemed to be quite familiar with the cultural body imagery and their contradictions. SM analysis made explicit their awareness and thoughts about the features that alter and embellish portrayed body image. The findings, to some extent, were revealing of their critical reflections towards fake images and disseminated messages. Moreover, some other mediating factors that affect their critical analysis were identified; for example, the empathy adolescents have with the associated body image values. From this standpoint, although body appearance can be the bait to engage with Instagram images, much of the narrative context of images can be compelling of body image attitudes (Coleman, 2009), and can be risk factors to ameliorate the critical skills (Gordon *et al*., 2020; Tamplin *et al*., 2018).

Yet body image narratives in SM are not solely constructed by the power of images or solely human interaction. As discussed in this paper, technological mechanisms such as AI algorithms have a critical role in both the dissemination and maintenance of body image values. Nevertheless, by analyzing participants' knowledge of the AI mediation in phenomena like the filter bubble, we found a gap still uncovered. A qualitative exploration of the factors that influence body image stereotypes in Instagram addressed individual action as the main reason. Activities implemented during the conducted workshop allowed students to better understand this phenomenon; however, post-intervention results show much of this new knowledge is integrated to reshape the role of individual agency and justify the misleading role of algorithms.

This pilot study is the first to examine the effects of a SM AI intervention on the topic of body image. It ran under an initiative to inform teenagers about hidden dangers within SM as an extracurricular activity. As a pilot study that ran prior to a full-scale study there were some limitations. The participation levels were limited and affected the sample size that was used. The methodological design of the study could also stand as a limitation as the instruments that were used were not evaluated prior to the workshop. Due to the COVID-19 pandemic, the workshops were conducted virtually and could have affected the participation and motivation of the participants. Finally, the trial was conducted with females only, future research needs to design a similar workshop to reflect on both genders' needs.

SM is becoming an important medium for the transference of body literacies amongst teenagers. Therefore, future research related to this topic should cover the gap that exists within SM studies and SML skills in the line of body image and AI mechanisms. Currently, only a few SM intervention studies cover the topic of body image, and to our knowledge, not many or none exist that cover the topic of body image within SM and the impact AI has on it. Forthcoming work in this line of research aims to replicate this study in an educational simulated SM environment to embrace the nature of SM platforms and educate teenagers on how SM platforms work, with the aid of narrative scripts and AI mechanisms (Hernández-Leo, *et al*., 2021; Ognibene, *et a*l., 2021). Forthcoming research will also provide material to cover body image issues to cover mixed-gender groups.

6. CONCLUSIONS

Current body culture is quietly shaped by our electronic media. Compared to some decades ago, SM platforms mediate in the construction of the body literacies; they cover a large amount of information concerning the body (perceptions, attitudes, practices, and policies). The emergence and rapid integration of SM into our lives have turned them into an arena to forge our body image and identity. A quick glance at SM sites such as Instagram can hint at the emerging narratives

connected to the body with diverse profile accounts that teach us how to care, look and groom the body. Just as once printed media or television stood out as body monitors, SM supervises the body and colonizes its image through the dissemination of interactive stories, alluring images, provocative captions, emojis, and hashtags. In this line, it is not strangely surprising that its relevance and impact could have a greater extent in society, and therefore, the growing concern about its effects. Educational efforts engaging teens in story-based learning scenarios and playful activities show potential to improve their social media literacy skills enhancing healthy perspectives in the understanding of body image.

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