

ANALYSIS OF THE ATTRIBUTES THAT INFLUENCE THE INTENTION OF USE OF YOUTUBE FITNESS CHANNELS BY SUBSCRIBERS ACCORDING TO AGE

INFLUENCIA DE LOS ATRIBUTOS EN LA INTENCIÓN DE USO DE CANALES FITNESS DE YOUTUBE POR SUSCRIPTORAS SEGÚN EDAD

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Abstract

In a post-pandemic COVID-19 era, sports users prefer to consume online content for exercise over traditional models. Thus, YouTube has emerged as an alternative technological tool to traditional training media for fitness and physical activity. The aim of the study was to analyse the most important attributes that influence the intention to use YouTube fitness channels by female subscribers, comparing the results according to age. The sample consisted of a total of 1383 women with an average age of 44 years. Channel attributes (social interaction, quality of information, visual content) and youtuber attributes (physical attractiveness, social attractiveness, homophily attitude), attitude towards using YouTube channels, satisfaction with YouTube channels and intention to use them were assessed. The results indicated that younger women had higher ratings, although women over 50 highlighted the social attribute of the YouTube fitness channel by connecting with other women of similar interests. Attitude towards YouTube channels and satisfaction were predictors of intention to use for all age groups. These results allow YouTubers to create better marketing strategies to better design their channel's content and attention to users.

Keywords: Fitness, youtuber, influencer, attributes, intention to exercise.

Resumen

En una época postpandemia COVID-19, los usuarios deportivos prefieren consumir contenido online para ejercitarse frente los modelos tradicionales. Así, YouTube ha emergido como una herramienta tecnológica alternativa los medios de entrenamiento tradicionales para mantenerse en forma y practicar actividad física. El objetivo del estudio fue analizar los atributos más importantes que influyen en la intención de usar canales fitness de YouTube por las suscriptoras, comparando los resultados según la edad. La muestra estuvo compuesta por un total de 1383 mujeres con una edad media de 44 años. Se evaluaron los atributos del canal (interacción social, calidad de la información, contenido visual) y del youtuber (atractivo físico, atractivo social, actitud homofilia), la actitud hacia el uso de canales de YouTube, la satisfacción y la intención de uso. Los resultados indicaron las mujeres más jóvenes tuvieron mejores valoraciones de los atributos. En las mujeres mayores de 50 años destacó el atributo social del canal fitness de YouTube al conectar con otras mujeres de intereses similares. La actitud hacia los canales de YouTube y la satisfacción fueron predictores de la intención de uso para todos los grupos de edad. Estos resultados permiten crear mejores estrategias de marketing para que los YouTubers puedan diseñar mejor el contenido de su canal y la atención a las usuarias.

Palabras clave: Fitness, youtuber, influencer, atributos, intención de ejercitarse.



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Introduction

In the current context, the post-digital era has transformed the way people interact and relate to each other. Social networks have become tools for communication and participation in various areas of social, cultural and work reality (Escamilla-Fajardo et al., 2021). In this sense, social platforms have changed the way we live, even modifying the way we consume products and services (Kim, 2022).

According to Meltwater and WeAreSocial (2023), social networks are an inescapable reality in today's world, with almost 60% of the world's population (some 4.76 billion people) actively using them. In addition, the penetration of mobile devices and internet access is very high, reaching some 5.44 billion and 5.16 billion people respectively, out of a total of 8.01 billion inhabitants on the planet. This data shows that social networking has become an essential element of people's daily lives.

During the pandemic, the way fitness influencers communicate (Li et al., 2023), especially through social media such as YouTube channels, became very important. YouTube, unlike other media such as Instagram or TikTok, allows long videos to be generated through which fitness influencers can develop their training sessions without having to generate many short videos.

Likewise, Spaniards spend an average of 67 minutes a day interacting with social networks, with mobile being the preferred device for access (97%) (IAB Spain & Elogia, 2023). These data reflect the importance of digitalisation in today's society, and the sports sector is no exception.

Sports organisations have embraced digitalisation as a way to improve their performance and adapt to new trends and technologies (Deloitte, 2023). All this only indicates that a digitalisation phenomenon led by social media has taken place (Dey et al., 2020). This has led to a growth in the number of users who can no longer conceive of their lives without the daily use of platforms such as Instagram, WhatsApp, Facebook or YouTube, either during their free time or for teaching and learning purposes. Thus, today's users prefer to consume content in a digital environment when, where and how they want (Dey et al., 2020).

Hand in hand with this social change, in the health and fitness sector the role of apps and online training tools has increased dramatically (Parker et al., 2021). Numerous companies have had to adapt their services to eliminate physical contact as a preventive measure during the pandemic (Choe et al., 2021). This development in health and fitness created an excellent environment for online contactless service delivery, opening the door to a new era in fitness service delivery (Zhu et al., 2022). In addition, this reduced the possibility of contagion and revolutionised the relationship between fitness service providers and consumers (Parker et al., 2021).

As such, social media appears to be a key avenue that can help disseminate powerful messages to a wider audience and attempt to inspire people to participate in physical activity and sport in the future (Hayes, 2020). However, it is important to be cautious about the information obtained from them. Users need to be able to identify the quality of the content they view. For example, different studies can be found addressing the quality of YouTube videos associated with recovery from injury and/or illness (Abed et al., 2023; Barlas et al., 2023; Diers et al., 2023).

In an era where consumers tend to rely more on the digital attributes of social media platforms for their decision-making process and where physical and personal contact has been reduced (Kim, 2022), YouTube stands out as one of the digital platforms that have become a key tool for sports professionals and fitness content creators (Sokolova & Perez, 2021) and an alternative to traditional training media, equally valid for fitness and exercise.

YouTube offers a wide variety of videos with routines, tips and motivation for all levels and goals, as well as the possibility to interact with other users and the creators themselves. In addition, YouTube allows access to content from any device and any location, making it easy to adapt to the preferences and needs of each user. For these reasons, YouTube has established itself as a leading platform in the field of online fitness, especially in relation to women (Sokolova & Pérez, 2021).

However, it is necessary to delve deeper into the personal motivations that lead women to the direct consumption of this content. It is also important to analyse the impact this could have on the general population. For this reason, the aim of this study is to analyse the most important attributes influencing the intention to use YouTube fitness channels by female subscribers, comparing the results according to age.

Youtube and sport

The importance of technology in the field of sport is undeniable, as it facilitates the development of physical activity and sport, as well as customer acquisition and loyalty (Valcarce & Díez, 2018). Among the most widely used technological tools are social networks, which allow sports companies to show their image and differentiate themselves from the competition (Caro-Vásquez et al., 2021). In addition, social networks favour communication and adaptation to changing situations (Abigail-Alexandra, 2021), which has been key to maintaining the online training and physical activity service during the pandemic (Guimarães et al., 2021; Veiga et al., 2021).

In this sense, the importance acquired by social networks in the sports sector is particularly noteworthy, with YouTube emerging as the one that facilitates and promotes, to a greater extent, the practice of sport when it is not possible to access sports facilities (Parker et al., 2021). Thus, YouTube has become a reference platform for sports and health content, both for amateurs and professionals (Sokolova & Pérez, 2021). In addition, many young people who did not have physical exercise habits have become motivated by YouTube videos showing different modalities and benefits of sport (Shen et al., 2019). YouTube has facilitated the dissemination of information and advice on fitness and health, with the participation of experts in the field (Sokolova & Pérez, 2021). Several authors have argued that YouTube has a number of advantages and benefits (e.g. accessibility, interactivity, social communities, etc.) that allow consumers to opt for its consumption and demand for the technology (Angosto et al., 2020, 2023; Kim & Kim, 2017; Lagoni, 2020; Sui et al., 2022). Sokolova and Perez (2021) indicated that the social factor of YouTube channels seems to be more valued by the female gender.

Based on the above, it is crucial to address the attributes (social interaction, quality of information, visual content, social attractiveness, physical attractiveness and homophily attitude) of YouTube and youtubers (influencers) to determine their influence on the subjects' intention to exercise.

Attribute social interaction

In this sense, the first attribute to take into account is social interaction. This construct refers to the communication relationship that is established between subscribers of the same channel or social network, through the use of tools such as comments, likes (or dislikes), which can lead subscribers to visit the content more regularly (Kim et al., 2008). YouTube channels are conducive places for subscribers to interact with each other as a result of their common interest in a given topic (Kim, 2022). They also allow them to build collaborative relationships with each other (Kim & Kim, 2017). These bonding links can help create a social connection and a sense of belonging that makes users feel part of the channel (Kim et al., 2020). Social interaction is likely to be a precursor to improved attitudes linked to physical practice, being more important in previously active individuals (Sokolova & Perez, 2021). In addition, members with greater social interaction with other community users show greater satisfaction by generating a sense of belonging (Kim et al., 2020). Social interaction can influence users' attitudes towards the channel itself by creating bonds between YouTube channel members (Fiedler & Sarstedt, 2014). The attitude may be conditioned by the feedback the user receives from the comments of the other members and may also influence the content itself (Sokolova & Pérez, 2021).

Attribute quality of information

The quality of information is important, as it is a key factor for the success of YouTube fitness channels. Users are looking for content that is clear, credible, understandable and backed by reliable sources (Ing & Ming, 2018). Information must be relevant, sufficient, objective and persuasive to generate trust and interaction (Park et al., 2007; Zhang et al., 2014). In addition, the information should be tailored to the level of complexity and subject matter of the channel, especially if it deals with sensitive topics such as health (Kim, 2022). Users subscribe to channels that offer them information that is useful, helpful and meets their knowledge expectations (Kim, 2022). The quality of information also influences users' attitude towards the channel and the recommendations they make to others (Ing & Ming, 2018) or intention to exercise (Li et al., 2023).

Visual content attribute

As for visual content, this is made up of all audiovisual content uploaded to the platform by users or youtubers who wish to offer it and transmit it to their followers (John & De'Villiers, 2020). These authors consider that all visual content shown tends to influence users' digital behaviour. In addition, users who intend to be physically active value the timeliness of the visual content offered. Compared to other platforms, visual content on YouTube allows users to enjoy content in a more interactive way (Kim, 2022). Thus, content will be more likely to be used as a tool for physical activity by subscribers (Kim & Kim, 2017). In addition, visual content can provoke intense responses and incite emotions among users (Geise & Baden, 2015; Iyer et al., 2014). The visual content of YouTube fitness channels is directly related to user experience and satisfaction towards the channel (Kim, 2022).

Attribute social attractiveness

Social attractiveness, on the other hand, refers to the social likeability of the youtuber among subscribers and their perception (Liu et al., 2019; Sokolova & Kefi, 2020). That is, audience perceptions of whether the communicator is liked and respected by others (Lee & Watkins, 2016). Perceptions of a youtuber's social attractiveness are often made up of several dimensions, although the most important might be those related to social, intellectual and holistic factors (Lee & Watkins, 2016).

Currently, those with high levels of social attractiveness could be famous athletes or influencers (Liu et al., 2019). Furthermore, it has been observed that communicators with a high level of social attractiveness are perceived as more credible, honest, persuasive and better informed (Flanagin & Metzger, 2007). They also generate greater audience identification with the youtuber (Crijns et al., 2017).

The social attractiveness variable seems to be associated with subscriber satisfaction, depending on the perception of the youtuber on a social level, satisfaction with a YouTube fitness channel could be influenced in one way or another (Kim, 2022). Parasocial relationships of channel users may be a mediating variable between physical attractiveness and intention to exercise (Li et al., 2023). However, Kim et al. (2023) found that social attractiveness had a significant influence on users' parasocial relationships, but it did not influence intention to continue exercising with fitness youtubers.

Attribute physical attractiveness

With regard to physical attractiveness, several authors report that people who are physically attractive are rated more positively by others, both in terms of personality and credibility (Corneille et al., 2005; Feingold, 1992). Furthermore, physical attractiveness can have a persuasive effect in marketing and advertising, as consumers tend to prefer products or services that are advertised by attractive people, if they match the audience's expectations (Buunk & Dijkstra, 2011; Kowal et al., 2022; Sakib et al., 2020).

In line with this variable is Hovland, et al.'s (1953) Theory of Persuasive Communication, which focuses on the fundamental elements that influence the persuasiveness of a message such as the source, the message itself and the characteristics of the audience. These authors consider credibility and the level of knowledge of the sender of the message to be relevant. Credibility can be affected by factors such as the expertise, reputation, authority and likeability of the source of the message. Therefore, the more knowledgeable the person, the more persuasive he or she is.

Therefore, physical attractiveness is a communicative resource that can increase message effectiveness and user satisfaction (Kim, 2022; Sokolova & Kefi, 2020). Li et al. (2023) have shown the influence of physical attractiveness on exercise intention with users' parasocial relationships as variables. While another study associated the influence of physical attractiveness with physical outcome expectations and desire for identification as mediators towards continued intention to exercise with fitness youtubers (Kim et al., 2023).

Attitudinal attribute homophily

Finally, social cognitive theory suggests that people can be easily influenced by social figures, such as youtubers or influencers, by perceiving them as similar to them (Bandura, 1994). This similarity is a factor that aids persuasion, especially if the similarity is relevant to the message (Bercheid, 1966; Brock, 1995). On the other hand, if users do not perceive the person as an expert, similarity would have the opposite effect (Goethals & Nelson, 1973). Prisbell and Andersen (1980) called homophily attitude as a construct linked to the number of interactions between individuals as similar communicators are more likely to interact with each other.

In our context, homophily attitude is the construct that describes the perceived similarity between the subscribers of a YouTube channel and the youtuber who creates the content (Sokolova & Kefi, 2020). In business, the attitude of homophily favours the identification of the buyer with the seller or product (Basil, 1996). In the context of YouTube, it could be applied to the youtuber and consumers who identify with the audiovisual content of the channel (Kim, 2022).

Thus, the creation of an online community that shares tastes, interests and concerns is one of the factors that contribute to the success of social platforms and networks (Nambisan & Watt, 2011). From social psychology, it has been observed that people seek to connect online with "similar others" to interact and obtain social support (Brown et al., 2007). In this sense, the opinion of other users influences the decision to purchase services or access relevant information on topics of common interest (Ayeh et al., 2013; Williams et al., 2010). According to Kim (2022), the attitude of homophily can facilitate the adoption of a certain behaviour and the generation of specific emotions towards YouTube content.

Attitude and intention to use the Youtube fitness channel

According to Davis (1989), a user's general attitude towards the use of a given system is an antecedent of their intentions to adopt it, being a variable that has been widely studied to identify and evaluate the motivations behind a specific behaviour (Rodrigues et al., 2016). Therefore, attitude levels could explain the behaviour of users who use a service through digital platforms (Wang & Jeong, 2018). In this context, Attitude towards a social platform (in this case YouTube and its content) could be understood as the degree to which this platform arouses positive feelings, a favourable climate in users and makes them feel good (Hsu & Lin, 2008). On YouTube, attitude towards videos has been found to be a strong predictor of one's intention to watch fitness videos on this platform (Sokolova & Perez, 2021).

Intention to use and adopt the YouTube channel could be understood as the likelihood, in the near future, of using the YouTube platform to watch videos related to fitness and physical activity (Kim, 2022). YouTube fitness videos could be used as a means to inspire users to start physical activity, giving them the final push they need to start or continue exercising (Sokolova & Perez, 2021).

Analysing other technological tools such as fitness apps, Ferreira-Barbosa et al. (2021) found that social influence and hedonic motivation were aspects that influenced intention to use apps. Furthermore, these authors found that intentions

were related to fitness app usage behaviour and satisfaction. Another study found that the relationship between behavioural intentions to use the app and members' overall satisfaction with the gym is positively mediated by e-lifestyles (Ferreira-Barbosa et al., 2023).

The gender and age perspective is a relevant issue today as often existing gaps condition consumer behaviour (Kanwal et al., 2022; Khan et al., 2020). There are no studies that compare the perception of subscribers focused on the female population or according to age and whose analysis of the subjects that consume these contents would also yield relevant information (Martín et al., 2023).

Materials and Methods

Participants

The sample consisted of a total of 1,383 women with a mean age of 44.34±10.1 years subscribers or followers of two influencer YouTube channels focused on the practice of physical exercise. Table 1 shows the descriptive data of the sample. Two thirds were followers of influencer 1, while the rest followed influencer 2. The majority of women exercised more than 3 times per week (67.6%) and were subscribed to between 1 and 3 influencer-related channels.

Table 1
 Descriptive statistics of the sample

Variables	N	%	
Age	Under 40 years old	427	30.9
	Between 40 and 49 years old	523	37.9
	50 years old or older	433	31.3
Influencer	Influencer 1	889	64.3
	Influencer 2	494	35.7
Frequency of weekly use of YouTube for exercise	No time	30	2.2
	1 time per week	56	4.0
	2 times a week	138	10.0
	3 times a week	224	16.2
	More than 3 times a week	935	67.6
Subscriptions to YouTube fitness channels.	No channel	67	4.8
	Between 1 and 3 channels	1075	77.7
	Between 4 and 5 channels	118	8.5
	More than 5 channels	92	6.7
	Other	31	2.2

Instruments

The assessment scale was formed according to eight variables previously validated in other studies and distributed in 30 items. The variables analysed were taken from the study by Kim and Kim (2017): (i) social interaction, five items; (ii) information quality, three items; and (iii) visual content, three items. The following variables were selected from Sokolova and Kefi's (2020) study: (iv) social attractiveness, five items; (v) physical attractiveness, three items; and (vi) homophily attitude, five items. Three items assessed satisfaction with the YouTube channel (Kim & Thapa, 2018), and two items on attitude towards the channel's videos (Hsu & Lin, 2008). Finally, an item on intention to watch Fitness on YouTube was included. The items were rated on a 5-point Likert scale (1.- Strongly disagree / 5.- Strongly agree). The reliability of the scale showed a Cronbach's alpha value of .91, while the reliability of the scales ranged from .84 to .93.

Procedure

Data were collected from two YouTube channels that shared content related to fitness and physical activity. Both channels had more than 100,000 followers each. Firstly, the influencers of the different channels were contacted with all the information about the study and sent the questionnaire for their consent. A positive response was obtained from two influencers. Subsequently, once the questionnaire was accepted by both influencers, they sent it to their subscribers via a link to their personal emails and through the channel.

The link gave access to the online survey using a Google Forms form, which specified the rules for completing the questionnaire and informed them of the anonymity and confidentiality of the data collected. The time spent by each user varied between 5 and 8 minutes. The date of data collection was between 14 February and 10 March 2022.

Statistical Analysis

Data were analysed using SPSS v28 statistical software. Descriptive statistics were analysed for quantitative variables (mean and standard deviation) and qualitative variables (frequency and percentage). An ANOVA test was used to compare results according to age, using Tukey's posthoc to discriminate possible differences between age groups.

The effect size was considered according to the criteria indicated by Domínguez-Lara (2018). In the case of the ANOVA test, according to this author, the most appropriate index is eta squared (η^2) with the following ranges of values: small effect with values between 0.01 and 0.06; medium effect with values between 0.06 and 0.14; and large effect with values greater than 0.14.

Finally, a multiple regression analysis was carried out taking into account the intention to use the YouTube channel as the dependent variable and the rest of the variables analysed as independent variables. The significance level was set at a value of $p \leq .05$.

Results

The comparative results of the variables associated with the YouTube channel according to age are shown in Table 2. In general, the group under 40 years of age were the women who presented the highest scores for quality of information, visual content, physical attractiveness and satisfaction. Social interaction was the lowest scoring variable in all groups, while satisfaction was the highest scoring variable. The 40-49 age group had the highest intention to use the YouTube channel. Statistically significant differences ($p < .05$) were found between the under-40 group and the 40-49 group on the variables of social attractiveness and homophilic attitude. In both cases the effect shown was minimal ($\eta^2 > .01$).

Table 2
Comparative statistics of Youtube attributes by age

Variables	Under 40 years old		Between 40 and 49 years old		50 years old or older		Sig.	η^2
	M	DT	M	DT	M	DT		
Social Interaction	1.82	1.10	1.88	1.10	1.92	1.1	.44	.001
Information Quality	4.77	.50	4.73	.60	4.72	.60	.50	.001
Visual Content	4.78	.40	4.74	.60	4.71	.60	.20	.002
Social Attractiveness	4.72	.50	4.80	.50	4.74	.60	.04*	.005
Physical Attractiveness	4.54	.70	4.46	.70	4.46	.80	.18	.002
Homophilic Attitude	3.40	.90	3.55	.90	3.46	1.10	.05*	.004
Attitude towards YouTube videos	4.52	.70	4.52	.70	4.48	.80	.56	.001
Satisfaction	4.84	.40	4.82	.50	4.79	.50	.24	.002
Intention towards YouTube videos	4.75	.60	4.77	.60	4.71	.70	.26	.002

Note: * Differences between Group 1 Less than 40 years and Group 2 Between 40 and 49 years. η^2 : eta squared; 0.01: small effect, 0.06: medium effect, 0.14: large effect.

Table 3 represents the multiple regression analysis as a function of female subscribers according to age. The dependent variable was the intention to use the YouTube channel. Considering the assumptions of multiple linear regression, the Durbin-Watson test value ranged between 1.89 and 2.00, which is between the values recommended by the literature (Turner, 2020). Furthermore, the ANOVA test was significant for all groups (Under 40 years: $F = 10.71(8)$; $p < .001$; Between 40 and 49 years: $F = 29.77(8)$; $p < .001$; 50 years and older: $F = 21.42(8)$; $p < .001$). Therefore, it is appropriate to perform linear regression.

Table 3
Multiple linear regression of intention to use Youtube by age

	Variables	β	t	Tolerance	VIF
Under 40 years old	(Constant)	1.82***	4.69		
	Social Interaction	.01	.31	.85	1.17
	Information Quality	.11	1.74	.61	1.65
	Visual Content	.04	.51	.71	1.41
	Social Attractiveness	-.03	-.45	.74	1.35
	Physical Attractiveness	-.03	-.56	.76	1.32
	Homophilic Attitude	-.01	-.17	.77	1.31
	Attitude towards YouTube videos	.19***	4.69	.83	1.21
	Satisfaction	.33***	3.90	.64	1.57
Between 40 and 49 years old	(Constant)	1.52***	6.01		
	Social Interaction	-.02	-.72	.85	1.18
	Information Quality	.09	1.66	.44	2.28
	Visual Content	.08	1.31	.40	2.51
	Social Attractiveness	.03	.37	.46	2.20
	Physical Attractiveness	.04	1.21	.71	1.40
	Homophilic Attitude	.02	.93	.77	1.30
	Attitude towards YouTube videos	.30***	8.43	.75	1.33
	Satisfaction	.15**	2.64	.58	1.72
50 years or more	(Constant)	1.76***	6.09		
	Social Interaction	.08**	2.96	.86	1.17
	Information Quality	-.03	-.42	.36	2.78
	Visual Content	.07	.81	.34	2.974
	Social Attractiveness	.01	.08	.42	2.40
	Physical Attractiveness	-.06	-1.35	.52	1.92
	Homophilic Attitude	.01	.42	.66	1.52
	Attitude towards YouTube videos	.36***	8.13	.71	1.42
	Satisfaction	.26***	3.29	.49	2.02

Nota: * $p < .05$; ** $p < .001$; *** $p < .001$

Intention to use the YouTube channel was predicted by attributes and other factors in subscribers under 40 years old by 41.2% by satisfaction ($\beta = 0.33$; $t = 3.90$; $p < .001$) and attitude towards YouTube videos ($\beta = 0.19$; $t = 4.69$; $p < .001$). Meanwhile, in the 40-49 age group, as in the previous group, intention to use the YouTube channel was 56.3% predicted by attitude towards YouTube videos ($\beta = 0.30$; $t = 8.43$; $p < .001$) and satisfaction ($\beta = 0.15$; $t = 2.64$; $p < .008$). Finally, the 50+ age group predicted by 53.6% the intention to use the YouTube channel by the variables attitude towards YouTube videos ($\beta = 0.36$; $t = 8.13$; $p < .001$), satisfaction ($\beta = 0.26$; $t = 3.29$; $p < .001$) and social interaction ($\beta = 0.08$; $t = 2.96$; $p < .003$).

Regarding collinearity data (tolerance and VIF), there was no collinearity in the predictor variables, as tolerance was around values of 0.5 not exceeding unity, while VIF was below five points considering the limits established in the academic literature (Akinwande et al., 2015).

Discussion

The main objective of the present research was to analyse the most important attributes that influence the intention to use YouTube fitness channels by female subscribers, comparing the results according to age.

From the social interaction variable, low mean scores were obtained in contrast to higher results obtained by Sokolova and Perez (2021) and Kim (2022). It might seem, if one takes the definition of social interaction from Kim et al. (2008), that the channels studied are not establishing a correct communication relationship between the subscribers of the channels analysed, nor are they making the most of the use of interaction tools such as comments.

However, the older age group had higher values. In fact, the regression analysis showed that, although they had low values, social interaction in the older age group was significant. It was also observed that social interaction was more important in those users who were more involved in training and fitness. These results are relevant as influencers should encourage and promote their followers or subscribers to interact with each other. Older women are often lonely and fitness channels offer them an opportunity to interact with peers. For example, Kim (2022) found that subscribed users rated social interaction higher than those who do not subscribe to any channel.

The quality of information among the female audience scored high, which is consistent with the findings of Sokolova and Perez (2021), who showed that the quality of the information provided, in this case the fitness sessions, gives them confidence and reliability. In a recent study Li et al. (2023) observed that the quality of the content was a determining factor influencing parasocial relationships. In addition, it also had a strong relationship with the intention to exercise in social media fitness consumers during the COVID-19 pandemic. Women would determine the quality of the information provided by the influencer to the extent that they noticed physical improvements over the course of the sessions. Or at least a better level of wellbeing or capacity for physical activity.

This fact is highlighted by the fact that the influencers themselves were men and, therefore, tend to be more traditionally associated with sport and physical exercise than women. Also, health-related content required more accurate information, and for this reason, the quality of the information plays a key role (Kim, 2022). Furthermore, this high rating suggests that users perceive the information provided by the channels to have a high degree of clarity, credibility and comprehensibility (Ing & Ming, 2018).

In reference to the visual content, it also stood out with high values, with a higher rating among younger women under the age of 40. It could be understood that female users are having a better experience when consuming the content (Kim & Kim, 2017). This high rating is also due to the fact that the visual content offered on the YouTube channel allows users to enjoy it in a more interactive way compared to other media (Kim, 2022).

These high results for visual content are related to the findings of John and De'Villiers (2020) who stated that users who intend to engage in physical activity and learn about fitness information value the visual content provided to be timely and comprehensive. In our study, it was highlighted that the influencers analysed were concerned about offering appropriate visual content that would allow them to capture a greater number of subscribers by providing attractive information so that women would decide to do physical exercise with them.

With regard to social attractiveness, the scores were quite high, with significant differences between age groups, with women under 40 and between 40 and 49 years of age scoring the highest on this aspect. This score was in line with Sokolova and Kefi (2020) who stated that female users perceive that the analysed youtubers arouse the liking and sympathy of the general public.

On physical attractiveness, it was observed that the ratings were also high, but slightly lower than those of social attractiveness, being higher in younger women. It could be deduced that the appearance of the youtubers studied conformed to the canon or sociocultural model established by their followers (Reis et al., 1980). The profile of the influencers analysed was of physically strong and defined young men, which has an impact on a possible sensual and attractive image towards women. At the same time, their own physical shape can influence the confidence of the information they transmit by being able to see the results of the workouts that the influencer himself carries out.

Regarding social attractiveness and physical attractiveness, recent studies have observed how this variable significantly influences the parasocial relationships between the influencer or youtuber and their followers (Ashraf et al., 2023; Li et al., 2023; Song et al., 2023). Furthermore, parasocial relationships acted as mediating variables with the intention to consume social media channels or purchase. However, Kim et al. (2023) did not find a direct influence of parasocial relationships on the intention to continue fitness with YouTube channels. Attractiveness also had an influence on consumers' attitude towards the intention to continue using YouTube videos for fitness (Dureau et al., 2022). On the other hand, one study found that physical attractiveness had an influence on followers' adherence to social media content and this in turn on one's own well-being (Lu & Chen, 2023).

In reference to the attitude of homophily or similarity, the ratings were moderate and statistically significant differences were found. The group of women between 40 and 49 were the ones who rated this aspect best, while the younger ones rated it worst. These results were similar to those obtained by Sokolova and Kefi (2020). While Kim (2022) and conceiving the attitude of homophily as a psychological matching based on my degree of resemblance to the youtuber. A recent study assessed the perceived similarity of fitness youtubers and found that this variable significantly influenced parasocial relationships and the desire for identification (Kim et al., 2023). However, neither parasocial relationships nor desire to identify had an influence on intention to continue exercising via YouTube channels.

The higher ratings in these groups may be due to the fact that the influencers studied (female athletes who train with high frequency and with an average age close to the one discussed) have a profile that is more similar and more in line with

the tastes of these groups of users. In this study, the homophilic attitude may be derived from the fact that women have the same interests of being active working women or housewives, with little free time available, and digital media offer them the flexibility to do physical activity in the little time available and in any place.

On the other hand, in the variable attitude towards the videos and satisfaction, we observed that the highest ratings were given by the youngest users under 40 years of age. This positive rating is in line with Hsu and Lin (2008), who indicated that the videos on the channels arouse positive feelings and make users feel good.

While satisfaction was higher for women over 50 than for women under 40, the older the age, the higher the satisfaction. This could be due to the fact that these channels have successfully met the previous expectations of the users (Al-dweeri et al., 2017). In another sense, it is possible that older women have not had a tradition of physical activity practice like younger women and therefore, the latter may have greater knowledge and experience and are more demanding.

Finally, looking at the intention to watch fitness on YouTube, the average rating of this variable also showed different results, with the middle group (aged 40-49) being the most engaged with the influencer. These findings are in line with Kim (2022), who stated that the likelihood of using YouTube to watch fitness-related videos in the future would be very high. Thus, this very positive rating was also related to the very positive rating on the attitude and satisfaction variables. For Hussein and Hassan (2017) there was a link between a user's satisfaction levels towards social networks and the intention of continued use over time. Maziri et al. (2020), attitude towards videos is a strong predictor of one's intention to watch fitness videos on YouTube. Sokolova and Perez (2021) also found that a higher intention to watch YouTube fitness videos is also related to a higher interest and likelihood of engaging in physical activity through this content.

On the other hand, it is important to highlight that the higher the frequency of training, the higher the ratings on all the items, compared to women who do not do so. Regarding the most influential attributes in the intention of subscribers according to their age, they determined that attitude towards YouTube videos and satisfaction influenced future behaviour on the use of YouTube channels. However, in the group of women over 50, social interaction was also significantly relevant in contrast to the other two groups. These results may be associated with the fact that older women may find themselves or feel lonely and the interaction on the channel provides them with an opportunity to socialise with peers.

This study has several limitations. Firstly, given the limited number of influencers ($n = 2$), the results cannot be generalised. In addition, these influencers had a large number of female subscribers compared to the very small number of men using the channel. At the same time, it is important to consider the results with caution as they may be somewhat biased as it was the youtubers themselves who disseminated the survey among their subscribers.

In this sense, future studies could consider a greater number of influencers, analyse the profile of the subscribers beforehand, and take into account the profile of the influencer (professional or amateur). Other future lines of research could focus in greater depth on looking for channels or content creators that meet a series of more specific parameters (for example, women vs. men, channels with a greater volume of followers vs. smaller ones, etc.).

Conclusions

The main findings of this study are that age is an aspect to be considered by influencers when developing content for their followers. In this case, female subscribers have a high satisfaction and attitude towards the channel. Women over 50 have a higher need for social interaction than younger subscribers. In general, younger women are the ones who have rated the attributes of the channel more highly, considering that they will be more familiar with the technologies than their older peers.

These results could have a great implication on a practical level as they may allow for more information on different groups of subscribers considering existing groups or interests. For the influencer it also helps to collaborate with commercial brands and to advertise brands that are focused on the analysed age groups. The visual content that is displayed is relevant when it comes to attracting followers, so influencers must provide precise and brief information about the content that they develop in each video.

It is also important to highlight the relevance that social interaction could have, where influencers should create spaces to promote their subscribers to interact and socialise with each other given their homophilic attitude. Thus, YouTube channels could offer new job opportunities and innovate to bring sports practice to people who lack the time to lead an active life or combat sedentary lifestyles.

Ethics Committee Statement

All participants who agreed to volunteer for this research were informed of the objectives and gave their consent included at the beginning of the questionnaire, which also informed of voluntary and anonymous participation, ensuring the confidentiality of the participants (in accordance with the Declaration of Helsinki).

Conflict of Interest Statement

The authors declare that there are no competing interests.

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Authors' Contribution

Conceptualization P.R.-P. & A.L.-B.; Methodology P.R.-P. & S.A.; Software S.A.; Validation J.M.Ñ.-S. & S.A.; Formal Analysis S.A.; Investigation P.R.-P.; Data Curation S.A.; Writing – Original Draft J.M.Ñ.-S., A.L.-B. & S.A.; Writing – Review & Editing J.M.Ñ.-S. & S.A.; Visualization A.L.-B.; Supervision S.A.; Project Administration P.R.-P. & S.A.; Funding Acquisition S.A. All authors have read and agreed to the published version of the manuscript.

Data Availability Statement

The data supporting the conclusions of this study are available from the corresponding author upon reasonable request.

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