



Más allá del «Like»: Diferencias de género en las motivaciones e impacto del uso de Facebook

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Resumen: La literatura previa que analiza las diferencias de género en los hábitos y motivaciones para usar Facebook, así como en el grado de conexión emocional con la plataforma, es inconclusa. Además, se ha prestado poca atención al papel que desempeñan los "me gusta" recibidos en las publicaciones de Facebook en el bienestar de las personas según su género. Esta investigación tuvo como objetivo abordar esta laguna en la literatura. Los/as participantes ($N = 156$ estudiantes universitarios/as) completaron al azar un ensayo en el que se manipuló la cantidad de "me gusta" recibidos en una publicación de Facebook (pocos vs. muchos "me gusta") y, a continuación, respondieron a las medidas dependientes. Los resultados mostraron que las mujeres (vs. hombres) pasaban más tiempo en Facebook a diario, lo que se asoció con un mayor uso de la plataforma con fines de entretenimiento y, en consecuencia, con una mayor conexión emocional con ésta. Además, los hombres que recibieron muchos "me gusta" en una publicación de Facebook mostraron una mayor autoestima en comparación con aquellos que recibieron pocos "me gusta"; sin embargo, este efecto no se observó en las mujeres. Esta investigación resalta la necesidad de seguir explorando los factores motivacionales que determinan el uso de Facebook, así como los beneficios y riesgos asociados.

Palabra clave: Uso de Facebook

Beyond the «Like» button: Gender Differences in Motivations and Impact of Facebook Usage

Abstract: Previous literature analysing gender differences in habits and motivations for using Facebook, as well as in the degree of emotional connectivity to the platform, is inconclusive. Furthermore, little attention has been paid to the role of likes received on Facebook posts in people's well-being based on gender. This research was aimed at addressing this gap in the literature. Participants ($N = 156$ college students) randomly completed an essay in which the number of likes received on a Facebook post (few vs. many likes) was manipulated and then responded to dependent measures. The results showed that women (vs. men) spent more time on Facebook daily, which was associated with increased use of the platform for entertainment and, consequently, with higher emotional connectivity to it. Moreover, men who received many likes on a Facebook post exhibited higher self-esteem compared to those who received few likes; however, this effect was not found among women. This research highlights the need to continue investigating the motivational factors that determine Facebook usage, as well as the associated benefits and risks.

Keyword: Facebook Usage

Introducción

The growth of social networking sites (SNSs) has continued to increase (Datareportal, 2024). Nowadays, 5.04 billion people worldwide use SNSs, with an average daily usage time of 2 hours and 23 minutes. In Spain, data collected by the Observatory of Digital Consumption (2023) indicated that women and individuals aged between 18 and 34 are the most active users in SNSs. Although there is a wide variety of SNSs (e.g., Instagram, Tik-Tok, WhatsApp), Facebook is one of the world's most active platforms, boasting 2.989 billion monthly users as of April 2023 (Facebook, 2023). In particular, university students appearing to be among the most active groups on Facebook,

spending an average of 80 minutes per day on the site (Igartua & Rodríguez-de-Dios, 2016).

Facebook is a personal platform where people create profiles and freely share life experiences through photos, videos, and updates about themselves. Additionally, individuals can express their interests and opinions and interact with other users by sending personal messages, commenting on posts, or expressing appreciation through 'liking' updates (De Vries et al., 2018). Previous literature has shown that SNSs like Facebook provide numerous benefits and advantages for the psychosocial development and well-being of young people (e.g., Weinstein, 2018; Ziv & Kiasi, 2016). However, research analysing Facebook usage and its impact on the young population is still scarce. This research aimed to examine some factors that could influence the emotional connectivity to Facebook (i.e., gender, time of usage, and entertainment motivation) and the effect of likes received on a Facebook post (few vs. many likes) on people's well-being.

Gender Differences in SNSs Usage

One of the most relevant current issues has been to analyse gender differences in SNSs usage. Previous literature seems to indicate that women tend to spend higher percentage of their daily time on Facebook than men (e.g., Biernatowska et al., 2017; Thompson & Loughheed 2012), publish more photographs, send more private messages, and update more frequently their profiles (e.g., Mackson et al., 2019; Thompson & Loughheed 2012). Similarly, several researchers have pointed out that young girls were more likely than boys were to use their SNS profile images to manage their image through the content they post on their profiles (e.g., Biernatowska et al., 2017; Feltman & Szymanski, 2018). In general terms, Biernatowska et al. (2017) also found that women manifested greater emotional connectivity to Facebook, incorporating Facebook as an integral part of their lives. In contrast, regarding the number of Facebook friends, previous findings are inconsistent: Some researchers have suggested that women have more friends on Facebook than men, whereas other studies have found no significant gender differences (Biernatowska et al., 2017). This, in turn, could be due to different motives behind having Facebook friends: Women more often than men use Facebook to maintain existing relationships, and men tend to use it to meet people and develop new relationships (Kowal et al., 2020).

According to the social theory of online self-regulation (Ozimek & Förster, 2017), people use SNSs as a means of self-regulation. These virtual platforms generate a source of resources that allow them to counteract deficiencies and fulfil psychological and social needs (e.g., entertain, strengthening relationships, seeking approval), which may affect people's well-being (Eşkisü et al., 2017). In this respect, empirical evidence yields gender differences in the needs that men and women meet through the use of Facebook. Several researches suggest that women use Facebook more with the intention of maintaining their relationships, actively participating in the virtual community by posting photos and carefully choosing the content posted on Facebook, and seeking social approval (Biernatowska et al., 2017; Fox & Vendemia, 2016), whereas men are more likely to use it to play games, learn about events, and make friends (Kowal et al., 2020, Muscanell & Guadagno 2012). Similarly, in a sample of Spanish high school and college students, Igartua and Rodríguez-de-Dios (2016) observed that the most relevant motivations for using Facebook were seeking for entertainment, participating in the virtual community, maintaining relationships, and self-expression, with women reporting significantly higher scores than men in the entertainment and virtual community dimensions. Furthermore, these authors demonstrated that spending more time connected to Facebook on a daily basis was

linked to increased usage of the platform for entertainment purposes, leading to higher levels of satisfaction with the social network.

Overall, although several studies have examined the effect of gender on the use intensity and motivations for using Facebook, the results are not conclusive. In addition, little effort has been devoted to examining the factors that predict emotional connectivity to Facebook and gender preferences within the platform. Therefore, this research explores the understanding of these issues by analyzing how Facebook connection time and entertainment seeking might indirectly explain why women experience greater emotional connectivity with the social network.

SNSs Usage and Psychosocial Well-Being

On Facebook, people may create an online identity through which they carefully select which aspects of themselves they want or do not want to show, thus generating the desired image. This process is known as selective self-presentation (Barroso, 2012). In this way, Facebook facilitates the development and maintenance of relationships, increasing the sense of control and alternatives to disapproval (Hanley et al., 2019). Additionally, because individual share their experiences and interests on SNSs, people's lives are made public and accessible to an audience, which is given the opportunity to comment and express its opinions (De Vries et al., 2018). Consequently, Facebook is a powerful source of peer acceptance, approval, and influence (Liu & Brown, 2014), playing an important role in the psychosocial development of younger (Chahín-Pinzón & Briñez, 2018; Choukas-Bradley & Prinstein, 2014).

One issue that has received little attention in previous literature is the role that likes received on Facebook posts play in psychosocial well-being. According to Dumas et al. (2017), the number of likes received on posts represents an important index of popularity among the young population and is interpreted by those who receive them as evaluative feedback about themselves (Liu & Brown; 2014), which could generate an effect on their well-being. Along these lines, Sánchez-Hernández et al. (2022) found that receiving few likes on an Instagram post compared to many likes generated elevated negative emotions and a decrease in positive emotions among adolescents. Similarly, Valkenburg et al. (2006) found that positive comments received on SNSs profile seemed to increase adolescents's self-esteem and satisfaction with life, whereas negative ones generated the opposite effect. Thus, receiving many likes and positive comments could be interpreted as an indication of attention and acceptance by the peer group, which, in turn, appears to favor psychological well-being (Portillo & Fernández-Baena, 2019). In contrast, in line with Eşkisü et al. (2017), not receiving the expected approval or receiving few likes on posts would generate feelings of social rejection, dissatisfaction, and low self-esteem. Based on previous findings, this research attempts to shed light on the role that the number of likes received on a Facebook post play in the people's well-being by gender.

Objetivos o hipótesis

This research aimed to explore gender differences in the usage habits and needs that college students fulfill through Facebook, as well as their emotional connectivity to the social network. Based on the reviewed literature, we expected that women would exhibit higher daily connection time on Facebook (Hypothesis 1a), a larger number of friends (Hypothesis 1b), more frequent weekly profile updates (Hypothesis 1c), and greater levels of emotional connectivity to Facebook (Hypothesis 1d) compared to men. Similarly, we hypothesized that women would use Facebook to a greater extent for entertainment (Hypothesis 2a), participation in the virtual community (Hypothesis 2b),

and maintaining relationships with friends (Hypothesis 2c), while we do not expect significant differences in self-expression motivation.

On the other hand, existing literature suggests that women tend to devote more time to Facebook compared to men, primarily for entertainment purposes (Feltman & Szymanski, 2018; Igartua & Rodríguez-de-Dios, 2016). Moreover, Igartua & Rodríguez-de-Dios (2016) demonstrated that increased time spent on Facebook correlates with higher satisfaction with the platform, particularly when motivated by entertainment, rather than other usage motives. Building upon these findings and prior research indicating that women (vs. men) seem to exhibit stronger emotional connectivity with Facebook (Biernatowska et al., 2017), we sought to explore whether this association could be indirectly explained through by extended time spent on the platform and a greater emphasis on entertainment. Specifically, we hypothesized that women (vs. men) would spend more time consulting Facebook, which would be associated with a greater intention to use the social network to meet the need for entertainment, and ultimately with high levels of emotional connectivity to Facebook (Hypothesis 3).

Finally, we further analysed the effect of likes received on Facebook on users' well-being, based on gender. Specifically, we expected people who received many likes on a Facebook post would manifest higher levels of self-esteem state (Hypothesis 4a), perceived social support (Hypothesis 4b), and life satisfaction (Hypothesis 4c) compared to people who received few likes. Moreover, we expected this effect to be stronger among women (vs. men): Women (vs. men) who received many likes (vs. few likes) on a Facebook post would manifest higher levels of self-esteem state (Hypothesis 5a), perceived social support (Hypothesis 5b), and life satisfaction (Hypothesis 5c).

Método

Participants

Of the 166 people who took the survey, two were excluded because they did not complete the corresponding experimental condition, seven because they responded incorrectly to the manipulation check item (i.e., the condition they were in), and one because he/she did not complete several measures on the questionnaire. Thus, the final sample consisted of 156 participants (74.4% [$n = 116$] women and 25.6% [$n = 40$] men), with an average age of 21.85 ($SD = 3.05$, range: 18–38 years). All of them had Spanish nationality and were undergraduates' students at the University of [Blinded]. A sensitivity power analysis using G*Power, revealed that our design ($N = 156$; $1 - \beta = 80\%$; $\alpha = .05$) had the ability to detect a medium effect size ($f^2 = .27$) using an ANOVA with four groups and three degrees of freedom.

Procedure and Design

Participants were selected through incidental sampling in different faculties of the University of [blinded]. First, we contacted the professors by email and requested their permission to conduct the study during their class period. Then, a previously trained researcher was in charge of giving the instructions and collecting the informed consent in accordance with the Declaration of Helsinki. As inclusion criteria, participants were required to have an active Facebook account. The participants were randomly assigned to one of the experimental conditions and allotted 15 minutes to complete a questionnaire about the measures of interest. The researcher was present during the questionnaire completion to verify participants' independent filling out of it and to clarify any doubt or question that arose. They collaborated voluntarily and anonymously,

always guaranteeing the confidentiality of the data. After participants completed the task, we informed them of the objectives of the study and thanked them for their collaboration. We carried out the research after receiving the approval of the Ethics Committee of the University of [blinded].

We used a between-subjects factorial cuasi-experimental design with an independent variable (IV; i.e., the number of likes) manipulated at two levels (few likes vs. many likes) using the critical incident technique (Flanagan, 1954). Like what other authors have previously done (e.g., Alonso-Ferres et al., 2021; Beltrán-Morillas et al., 2015), participants were randomly assigned to complete an essay intended to elicit a situation related to experimental manipulation and then to describe it (few likes: $n = 81$ participants; many likes: $n = 75$ participants). After completing the assigned condition, participants were instructed to fill out a subsequent brief questionnaire regarding the described situation.

Measures

Facebook Usage Habits

We evaluated Facebook usage habits using three items adapted from the measures used by Schwartz (2010). These items referred to three usage indicators: (a) *time connection* (i.e., “Last week, approximately how many minutes per day did you spend on Facebook?”), (b) *number of friends* (i.e., “Approximately how many friends do you have on Facebook?”), and (c) *number of updates* (i.e., “In the last seven days, approximately how many times have you updated your Facebook profile status?”). Participants responded using a categorical response format (time connection: less than 10 minutes, 10–30 minutes, 31–60 minutes, 1–2 hours, 2–3 hours, more than 3 hours; friends: 10 or fewer, 11–50, 51–100, 101–150, 151–200, 201–250, 251–300, 301–400, more than 400; and number of updates: 0, 1–5, 6–10, 11–15, 16–20, more than 20 times).

Emotional Connectivity to Facebook

We used an adaptation of the Facebook Intensity Scale (Ellison et al., 2007) to assess the degree of emotional connection that users experience towards Facebook and the extent in which they integrate its use into their daily practices. This measure was composed of six items on a 5-point Likert scale (1 = *totally disagree* to 5 = *totally agree*). Example items include “I feel that I am part of the Facebook community” or “Facebook is part of my daily activity.” Scale scores were calculated using average values, where higher scores indicated greater emotional connectivity to Facebook ($\alpha = .84$).

Facebook Usage Motives

We used the Facebook Usage Motives Scale (Igartua & Rodríguez-de-Dios, 2016) to measure participants’ main motivations for using Facebook. Specifically, we administered the following dimensions (a) *entertainment* (five items; e.g., “To have a good time”), (b) *virtual community* (four items; e.g., “To upload photos or videos”), (c) *relationship maintenance* (three items; e.g., “To stay in touch with my friends”), and (d) *self-expression* (two items; e.g., “To express my opinions on politics or social issues”). The response format was a 7-point Likert-type scale, ranging from 1 (*totally disagree*) to 7 (*totally agree*). We calculated the average score for each of the motivations, so higher scores indicated stronger motivation. The Cronbach’s alpha coefficients

obtained were .80 for entertainment, .66 for virtual community, .93 for relationship maintenance, and .67 for self-expression.

Manipulation of the Number of Likes

Using the critical incident technique (Flanagan, 1954), we instructed participants to recall and describe a situation in which they made a post on Facebook and subsequently received either few likes or many likes. More specifically, the instructions provided were as follows:

Thinking about the last month, recall and describe a situation in which you spent some time and effort preparing a Facebook post that was important and valuable to you, and then ...

(few likes)... received none or very few “likes” after posting it.

(many likes)... received a large number of “likes” after posting it.

Self-Esteem

The Rosenberg Self-Esteem Scale (Martín-Albo et al., 2007) was used to assess the degree of self-respect and self-acceptance experienced by the participants. It was composed of ten items on a 4-point Likert scale (1 = *totally disagree* to 4 = *totally agree*), of which five are positively worded (e.g., “I think I have several good qualities”) and five are negatively worded (e.g., “Sometimes I feel really useless”). We calculated the average score of scale, so higher scores indicated stronger self-esteem. The Cronbach’s alpha coefficient obtained was .87.

Perceived Social Support

The Perceived Social Support Scale (Quiroz et al., 2015) was used to assess the degree to which a person feels loved, esteemed, and part of a group. It consisted of 23 items divided into three subscales: (a) family (eight items; e.g., “My family cares a lot about me”), (b) friends (seven items; e.g., “My friends respect me”), and (c) other people (eight items; e.g., “I am respected by other people”). Participants responded using a 5-point Likert scale ranging from 1 (*totally disagree*) to 5 (*totally agree*). We calculated the average of the items as a global indicator of perceived social support. Higher scores indicated greater perceived social support ($\alpha = .91$).

Satisfaction with Life Scale

We used the Satisfaction with Life Scale (Spanish version of Atienza et al., 2000) to evaluate people’s overall judgment about their satisfaction with their life. It consisted of five items (e.g., “In most ways my life is close to my ideal”) with a Likert scale ranging from 1 (*totally disagree*) to 5 (*totally agree*). We calculated the average score of scale, with high scores indicating high satisfaction with life ($\alpha = .85$).

Manipulation Check

We designed a manipulation check item to verify the experimental manipulation effectiveness and, therefore, whether the participants had responded to the measures in accordance with the situation they had just recalled (i.e., “In relation to the situation you have recalled, you received: [a] none/very few likes or [b] many likes”).

Sociodemographic Characteristics

We collected data about participants' gender ("What is your gender identity? Man/Woman/Other [specify]"), age ("What is your age?"), and nationality ("What is your nationality? Spanish/ Other [specify]").

Statistical Analysis Strategy

We performed data analyses using SPSS software, version 25. To test the effectiveness of the experimental manipulation, we performed a chi-square test. Then, we carried out a descriptive frequency analyses to determine Facebook usage habits and motivations. Subsequently, to assess gender differences in habits and motivations for using Facebook, we conducted an independent samples t-test. We included gender (0 = *man*, 1 = *woman*) as an IV, and we introduced indicators of use (i.e., time connection, friends, and updates) and motivations (i.e., entertainment, virtual community, maintaining relationships, and self-expression) as dependent variables (DVs). Thereafter, we ran a serial mediation analysis using Model 6 (Hayes, 2018) of the PROCESS program (version 4.1) to examine the indirect effect of gender on emotional connectivity to Facebook through connection time and entertainment motivation. We included gender as a predictor (X), emotional connectivity to Facebook as a criterion variable (Y), and connection time (M1) and entertainment motivation (M2) as mediating variables. We used Monte Carlo simulations (5,000 replications and 20,000 draws) to run a post hoc power analysis for two serial mediators and test the indirect effects in our sample ($N = 156$). Ultimately, we performed a MANCOVA to test the effect of the number of likes received and gender on people's well-being. We included the number of likes (0 = *few likes*, 1 = *many likes*) received and gender as IVs, and self-esteem, perceived social support, and life satisfaction as DVs. To ease the interpretation of the two-way interactions, we performed simple slope tests (Model 1; Hayes, 2018).

Results

Preliminary Analyses

Manipulation Check

The results showed that 97.6% of the participants assigned to the none/few likes condition responded correctly to the manipulation check item (i.e., they selected the *none/very few likes* option), and 93.8% of the participants belonging to the many likes condition also correctly identified their condition (i.e., they indicated *many likes* option). The chi-square test yielded statistically significant differences and a large effect size ($\chi^2 [1, 163] = 136.36, p < .001, \phi = 0.92$), supporting the manipulation's effectiveness. We removed from the analysis those participants ($n = 7$) who failed the manipulation check item.

Descriptive Statistics and Correlations Among Study Variables

The results indicated that most of the participants (41.3%, $n = 85$) had fewer than 250 Facebook friends, 19.4% ($n = 30$) estimated having between 301 and 400 friends, while 25.8% ($n = 40$) confirmed having more than 400 contacts saved on their account. Moreover, most of them (59.4%, $n = 92$) connected to Facebook for less than one hour, 20.5% ($n = 32$) for one to two hours, 9% ($n = 14$) for two to three hours, and 11% ($n = 17$) did so for more than 3 hours. Similarly, 64.5% ($n = 98$) of participants indicated that

they did not update their Facebook profile at all, whereas 30.3% ($n = 46$) did so between one and five times per week.

On the other hand, the results showed that the main reason for using Facebook was entertainment ($M = 4.35$, $SD = 1.22$), followed by participation in the virtual community ($M = 4.30$, $SD = 1.25$), maintenance of relationships ($M = 4.15$, $SD = 1.77$), and self-expression ($M = 2.97$, $SD = 1.65$).

Main Analyses

Gender Differences in Usage Habits and Motivations for Using Facebook

The results showed statistically significant gender differences only in daily connection time ($t[153] = -3.14$, $p = .002$, 95% CI $[-1.40, -0.32]$, $d = -0.60$), indicating that women spend more time consulting Facebook than men do ($M_{women} = 3.41$; $SD = 1.54$; $M_{men} = 2.55$; $SD = 1.32$), which supported Hypothesis 1a. However, we found no statistically significant effects of gender on the number of friends, weekly updates, and emotional connectivity ($p > .05$), rejecting Hypothesis 1b, 1c, and 1d, respectively. Similarly, the results yielded no statistically significant gender differences on the motivations for using Facebook ($p > .05$), which leads to reject Hypothesis 2. See Table 1 for more detail.

Table 1.
Descriptive Statistics and Correlations Among Study Variables.

	1	2	3	4	5	6	7	8	9	10	11
1. Friends	–										
2. Connection time	.29***	–									
3. Updates	.27***	.17*	–								
4. Emotional connectivity	.10	.50***	.03	–							
5. Entertainment	–.02	.28***	–.12	.34***	–						
6. Virtual community	.05	.18*	–.06	.25**	.57***	–					
7. Maintenance of relationships	.04	.001	.03	–.02	.17*	.15	–				
8. Self-expression	.13	.10	.07	.15	.16*	.23**	.17*	–			
9. Self-esteem	.11	–.05	.01	–.04	–.09	–.04	.14	–.03	–		
10. Perceived social support	.18*	.07	.12	.001	–.10	–.03	.11	.10	.48***	–	
11. Life satisfaction	.17*	.13	–.04	.13	.15	.12	.09	–.07	.33***	.42***	–
M (SD)	6.68 (2.09)	3.19 (1.53)	1.43 (0.69)	2.79 (0.72)	4.35 (1.22)	4.30 (1.25)	4.15 (1.77)	2.97 (1.65)	3.23 (0.51)	4.12 (0.36)	3.53 (0.81)
Mmen (SD)	6.88 (1.98)	2.55 (1.32)	1.44 (0.85)	2.69 (0.71)	4.37 (1.12)	4.13 (1.10)	4.44 (1.93)	3.13 (1.79)	3.27 (0.64)	4.11 (0.40)	3.46 (0.74)
Mwomen (SD)	6.62 (2.13)	3.41 (1.54)	1.43 (0.63)	2.82 (0.72)	4.34 (1.25)	4.36 (1.30)	4.05 (1.71)	2.91 (1.60)	3.21 (0.45)	4.12 (0.34)	3.56 (0.83)
Gender difference t	0.67	–	0.02	–1.00	0.13	–0.98	1.20	0.70	0.61	–0.15	–0.69
Cohen's d	0.13	–0.60	0.01	–0.18	0.03	–0.19	0.21	0.13	0.11	–0.03	–0.13

Note. * $p < .05$, ** $p < .01$, *** $p < .001$

Indirect Effect of Gender on Emotional Connectivity to Facebook Through Connection Time and Entertainment Motivation

As shown in Table 2 and Figure 1, the results highlighted a statistically significant indirect effect of gender on emotional connectivity to Facebook through connection time and entertainment motive ($b = 0.03$, $SE = 0.02$, 95% CI $[0.004, 0.06]$). Thus, gender was indirectly linked to emotional connectivity to Facebook via their effects on increased time spent in the social network and the search for entertainment. In other words, women (vs. men) spent more time checking Facebook, which was positively associated with using the social network to meet the need for entertainment and, ultimately, was related to higher levels of emotional connectivity to Facebook. Post hoc power analysis revealed that our sample ($N = 156$) had the ability to detect the first

indirect effect (Gender → Connection Time → Emotional Connectivity) with 88% power, the second indirect effect (Gender → Entertainment Motive → Emotional Connectivity) with 15% power, and the third indirect effect (Gender → Connection Time → Entertainment Motive → Emotional Connectivity) with 71% power. See Table 2 for more detail.

The variables introduced in the model predicted 29.56% of the variance of the tendency to show emotional connectivity to Facebook. The total effect of gender on emotional connectivity was not significant ($b = 0.14$, $SE = 0.13$, 95% CI $[-0.12, 0.40]$). These findings supported Hypothesis 3.¹

Table 2.
Multiple Mediation Analysis of Gender, Connection Time and Entertainment Motive on Emotional Connectivity to Facebook.

	Connection time (CT)			Entertainment motive (EM)			Emotional connectivity (EC)		
	Coeff.	SE	95% CI	Coeff.	SE	95% CI	Coeff.	SE	95% CI
Constant	2.55	0.24	[2.08, 3.01]	3.78***	0.25	[3.29, 4.26]	1.57***	0.20	[1.17, 1.98]
Gender (G) ^a	0.85**	0.27	[0.31, 1.40]	-0.25	0.22	[-0.69, 0.19]	-0.02	0.12	[-0.25, 0.20]
Connection time				0.23***	0.06	[0.11, 0.36]	0.20***	0.03	[0.13, 0.27]
Entertainment motive							0.14**	0.04	[0.05, 0.22]
	$R^2 = .06$			$R^2 = .08$			$R^2 = .30$		
	$F(1,152) = 9.66, p = .002$			$F(2,151) = 6.81, p = .002$			$F(3,150) = 20.99, p < .001$		
Indirect effects	Effects		SE		Symmetric BCI				
Total	0.17		0.07		[0.03, 0.32]				
I1	0.17		0.06		[0.07, 0.30]				
I2	-0.03		0.03		[-0.10, 0.02]				
I3	0.03		0.02		[0.004, 0.06]				

Note: CI = confidence interval. The indirect effects are significant where the bootstrap CI does not include the value 0.

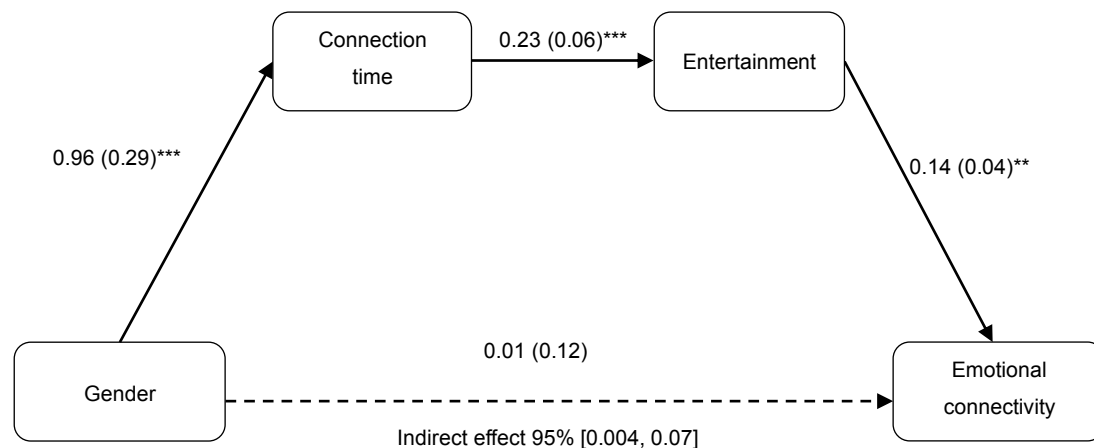
I1 = G→CT→EC; I2 = G→EM→EC; I3 = G→CT→EM→EC.

^a0 = man, 1 = woman

* $p < .05$, ** $p < .01$, *** $p < .001$

Figure 1.

Indirect Effect of Multiple Steps Between Gender and Emotional Connectivity to Facebook Through Connection Time and Entertainment Motive.



Note. Non-standardized beta coefficients reported with standard errors in parentheses.

Gender: 0 = man, 1 = woman

* $p < .05$, ** $p < .01$, *** $p < .001$

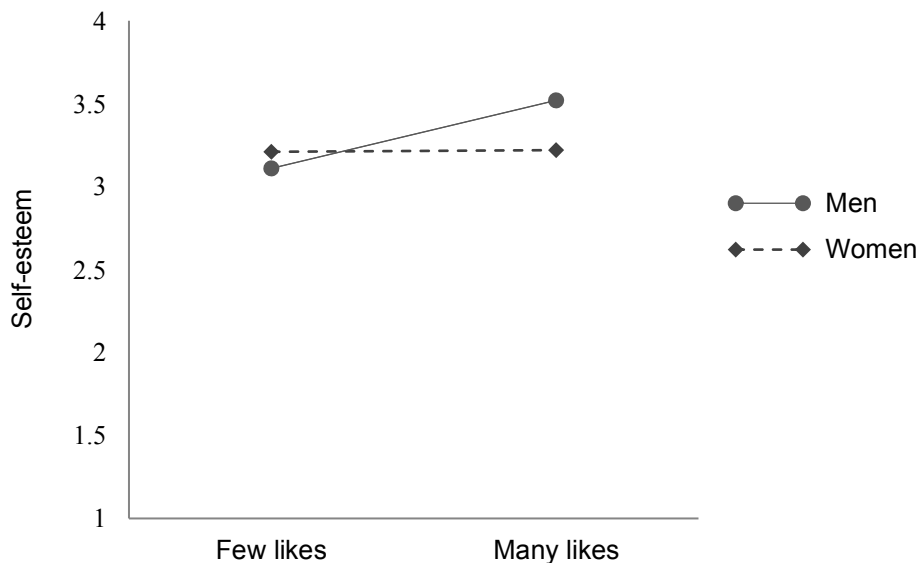
¹We additionally conducted the same mediation analysis (Model 6; Hayes, 2018) using the other motivational dimensions (i.e., virtual community, relationship maintenance, and self-expression) as M2, separately. The results indicated that gender did not indirectly affect emotional connectivity to Facebook through time spent on the platform and virtual community ($b = 0.01$, $SE = 0.01$, 95% CI $[-0.002, 0.03]$), relationship maintenance ($b = -0.0002$, $SE = 0.003$, 95% CI $[-0.007, 0.01]$), or self-expression ($b = 0.004$, $SE = 0.01$, 95% CI $[-0.004, 0.02]$).

Impact of the Number of Likes Received on a Facebook Post on Self-Esteem, Perceived Social Support, and Satisfaction with Life

The results showed a significant main effect of the number of likes received on self-esteem in the expected direction (Wilks' = 0.96, $F[1, 155] = 5.16$, $p = .025$, $\eta_p^2 = .033$). That is, people who received many likes on their posts showed higher levels of self-esteem compared to people who received few likes ($M_{many} = 3.28$; $SD = 0.44$; $M_{few} = 3.18$; $SD = 0.56$), supporting Hypothesis 4a. In contrast, we found no effects of the number of likes received on perceived social support (Wilks' = 0.96, $F[1, 155] = 1.64$, $p = .203$, $\eta_p^2 = .01$) and life satisfaction (Wilks' = 0.96, $F[1, 155] = 0.03$, $p = .866$, $\eta_p^2 = .00$), rejecting Hypothesis 4b and 4c, respectively.

Furthermore, the results yielded a statistically significant interaction effect between the number of likes received and gender on self-esteem (Wilks' = 0.96, $F[1, 155] = 4.58$, $p = .034$, $\eta_p^2 = .03$). Contrary to our predictions, simple slopes (Model 1; Hayes, 2018) indicated that the effect was statistically significant for men ($b = 0.41$, $SE = 0.16$, 95% CI [0.09, 0.73]), but not for women ($b = 0.01$, $SE = 0.09$, 95% CI [-0.17, 0.20]; see Figure 2). We found no statistically significant interactions between the number of likes received and gender on perceived social support (Wilks' = 0.96, $F[1, 155] = 0.02$, $p = .894$, $\eta_p^2 = .00$) and life satisfaction (Wilks' = 0.96, $F[1, 155] = 0.28$, $p = .600$, $\eta_p^2 = .00$). This set of results rejected Hypothesis 5.

Figure 2.
Interaction Between Number of Likes and Gender on Self-esteem.



Discusión

The present research aimed to explore gender differences in the usage habits and needs that people meet through Facebook, as well as the impact of the number of likes received on Facebook posts on participants' well-being based on gender. First, our findings suggested that younger people seem to have integrated Facebook usage into their daily routines: 20.5% of the participants connected on average between 1 and 2 hours a day, 25.6% claimed to have more than 400 friends on their account, and 29.5% updated their profile between one and five times a week. Moreover, in line with the findings of Igartua and Rodríguez-de-Dios (2016), our results showed that the main

motivations for using Facebook were the search for entertainment, followed by participating in the virtual community, maintaining relationships, and self-expressing. According to the social theory of online self-regulation (Ozimek & Föster, 2017), the Facebook community may generate a source of resources for the meeting of individual needs. In this sense, our results suggest that people tend to use Facebook to entertain themselves, interact with other users, share information on their account profile, and express feelings and opinions. However, contrary to our predictions and previous literature (e.g., Biernatowska et al., 2017; Kowal et al., 2020), we did not find gender differences in these motivations for using Facebook. Beyond gender, other individual characteristics could be determinant in explaining personal differences in Facebook usage. Therefore, more research is needed in this area to clarify the factors that motivate the use of this social network.

Second, regarding Facebook usage habits, our results only pointed out gender differences in the connection time. In line with previous findings (e.g., Mackson et al., 2019; Thompson & Loughheed 2012), women participants spent more daily time consulting the social network than men did. In contrast, we found no significant gender differences in the number of friendships and weekly profile updates. The aforementioned could indicate that the influence of gender in the Facebook usage is limited only to the time of connection, and not so much to the activity in which men and women engage on this social network. However, more research is needed to draw such conclusions.

Third, the results supported our initial predictions about the indirect effect of gender on emotional connectivity to Facebook through connection time and entertainment motivation. Specifically, we observed that women (vs. men) reported more connection time to Facebook, which was associated with a greater tendency to use the social network for entertainment purposes, ultimately leading to higher levels of emotional connectivity to Facebook. Consistent with the findings of Igartua and Rodríguez-de-Dios (2016), we additionally observed that this indirect effect was evident only for the entertainment motivation, and not for the motivations related to virtual community, relationship maintenance, and self-expression. In this sense, women (vs. men) seem to spend more daily Facebook time for entertainment, and this motivation seems to be the only one to determine a greater emotional connectivity with the network. Such findings could help clarify the process by which women (vs. men) experience a high emotional connection to Facebook. However, it should be noted that the second indirect effect, which examines the relationship between gender and emotional connectivity to Facebook through entertainment motivation, was not significant. This seems to suggest that women's intention to seek entertainment through Facebook does not necessarily lead to emotional connectivity to the social network, because women need to spend a lot of time connected to Facebook to experience such connectivity.

Finally, the present research showed that the number of likes received (many vs. few likes) on a Facebook post affected individuals' self-esteem. Specifically, those who received many likes on their posts manifested higher levels of self-esteem compared to people who received few likes. These results extend the previous findings by showing that the likes received seem to be indicative of evaluative feedback and social approval (Liu & Brown; 2014). In line with the research of Portillo and Fernández-Baena (2019) and Valkenburg et al. (2006), this could indicate that receiving a large number of likes on posts favours self-esteem, whereas receiving few likes generates the opposite effect. In contrast, the number of likes does not seem to affect perceived social support life satisfaction. According to Dumas et al., (2017), likes received on Facebook posts represent a popularity index from which younger people make a value judgment (positive or negative) about themselves, which may influence their self-esteem. Furthermore, the results showed a significant interaction effect between the number of

likes received and gender on self-esteem. Surprisingly, the number of received likes affected men's self-esteem; however, this effect was not observed in women. These results contradict previous evidence suggesting that women are more susceptible to evaluative feedback from their Facebook audience (Fox & Vendemia, 2016; Liu et al., 2017). A possible explanation for this phenomenon could be that, as women appear to use profile updates to manage their image more than men (Feltman & Szymanski, 2018), they may be establishing consistency between the effort invested in managing their posts and their expectations regarding the feedback they will receive, thereby protecting their self-esteem. On the contrary, since men appear to invest less effort than women in managing their image, it could be that, compared to women, they perceive the number of likes received as a more genuine evaluation of themselves. Consequently, an effect of the number of likes on their self-esteem is observed. However, more research is needed to support such claims.

Although our findings add to the existing literature, some limitations need to be addressed. First, the critical incident technique may provide only a limited perspective on the impact of the number of likes on individuals' well-being by focusing on specific events (i.e., the recalled incident). Moreover, while previous literature in social psychology (e.g., Alonso-Ferres et al., 2021; Beltrán-Morillas et al., 2015) has demonstrated the effectiveness and strong external validity of this retrospective technique, it could potentially trigger recall biases. However, it is worth noting that we manipulated the likes received, allowing for greater control over our findings and thus minimizing other causal pathways. Future researchers should employ alternative experimental methodologies to enhance convergent validity. Second, the sample selection was carried out by nonprobability snowball sampling, and we only selected college students of the University of [blinded], which limits the generalisability of the results to the rest of the young population. We suggest that future studies corroborate our findings using random sampling to obtain a heterogeneous sample in terms of, for example, age, cultural values and nationality. Similarly, we encourage upcoming researchers to examine the moderating role of additional individual variables beyond gender in the relationship between likes received on Facebook and users' psychosocial well-being. For instance, factors such as the propensity for social comparison or the inclination to seek feedback on Facebook could be examined.

The present study provides new data about Facebook usage habits in a sample of college population, as well as on the main motivations that drive such use. As the research itself shows, these people have integrated the use of Facebook into their daily practices, constituting an important self-regulatory tool for them. For this reason, and because of the psychosocial impact of SNSs on the development of adolescents and young people, it is vital to continue investigating the social and individual factors that determine their usage, as well as to uncover the benefits and risks associated with these SNSs. Finally, this research highlights the need to develop intervention programs based on the responsible use of SNSs in the educational context, providing the youngest people with tools that allow them to alleviate the prejudices associated with their misuse.

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