



# The usage time of social media as a predictor of customer loyalty

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## Abstract

This paper aims to shed light on the potential influence of daily usage time of social media on customer loyalty through social media. The main objective is to identify, on the one hand, possible generational differences regarding usage time and, on the other, what characteristics of social media posts impacting loyal customer outcomes are most affected by usage time. To this end, after an exhaustive review of the current state of the art, an online survey was conducted in the last quarter of 2022 with a sample of 485 individuals to assess their opinions and intentions toward different types of social media posts. Attitudinal responses were collected for 12 study variables, and an independence test and a series of regressions were conducted to validate the hypotheses. The results indicate that there are indeed generational differences in social media usage time. Additionally, it was observed that usage time is a significant predictor of social media loyalty in general and, specifically, for loyalty created through posts with relevant content, campaigns with incentives, and popular content among friends. Among the conclusions of this study is the applicability to the business sector, regarding the various considerations that companies should take into account based on their communication objectives and the target user profile, as well as the type of social media posts they should consider.

**Keywords** Usage time · Social media · Loyalty · Generations

**JEL classification** M31

## Introduction

Currently, the presence of social networking sites (SNS) and their constant change and evolution require companies to adapt their digital marketing strategies to maintain customer loyalty. Therefore, SNS are extensively studied in the scientific literature.

The concept of *SNS usage time* and how it can affect various aspects has been employed in numerous studies, mainly of a sociological and psychological nature (De Cock et al., 2014), but its development in the field of business and marketing is still limited. This study aims to address this gap.

When discussing the topic of digitization, *differences related to age or generational membership* always arise. Some authors claim that the key differentiating factor of Millennials compared to other generations is the introduction of technology into their lives practically from birth. However, Generation X did not grow up with current technologies, learning instead to use them as adults, gradually adapting to them and maturing as technology evolved (Calvo-Porrá & Pesqueira-Sanchez, 2020). This article will identify whether there are significant differences in daily usage time between these two generations.

At the same time, previous literature contains some references that link the concept of SNS to *customer loyalty*, such as the study by Erdogmus and Cicek (2012). However, the current study adds two novel components to Erdogmus and Cicek's model: the variable of usage time and the three key

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variables that compose the concept of loyalty. By combining these three knowledge blocks, it assesses the potential direct relationship between SNS usage time and the generated loyalty.

To deepen the concept of loyalty through SNS and provide novel value compared to previous studies, this study measures the influence of usage time as an independent variable on the loyalty generated through the four analyzed characteristics of SNS posts. Most previous studies only measure the total time spent on specific SNS platforms, thus providing little information about specific activities and the shared and encountered content (Valkenburg et al., 2022a).

The wide variety of conceptualizations regarding time-related activities on SNS in previous studies underscores the fundamental need for a more content-based evaluation, focusing on what people do and see on SNS (Valkenburg et al., 2022b). This study aims to respond to this need, linking time usage to loyalty generated through relevant content, content with advantages, shareable posts, and employed images.

Therefore, this analysis addresses three questions with the aim of establishing differences in opinions and intentions among the users included in the study sample. Firstly, whether there are indeed significant differences in usage time between Generation X and Millennials. Secondly, regarding SNS posts and the loyalty generated through them, whether daily usage time serves as a predictor of loyalty generated by SNS posts. Finally, it considers this same question specifically for each analyzed characteristic.

What makes this study unique is the combined analysis of all these factors and the in-depth exploration of SNS post characteristics. Its findings are expected to be beneficial in practical business settings, providing companies with the knowledge to execute precise segmentation actions and create specific SNS posts to achieve the objectives set within their loyalty strategies.

## Theoretical framework

### SNS usage time

The increasing amount of time spent online, in general, has been frequently highlighted in the scientific literature as a subject of study (De Cock et al., 2014). The growth in SNS usage time has even led to discussions of SNS addiction.

Previous studies do not converge on a single conclusion regarding whether this upward trend in usage time is a positive or negative factor. On the one hand, the time spent on SNS has been linked to a negative mood, mental health issues, loneliness, depression and some other disorders (Hunt et al., 2018). On the other, it has been associated

with positive outcomes such as overall satisfaction and happiness (Pittman & Reich, 2016). Some studies have found that more time spent on Facebook is associated with greater social capital, and individuals more likely to use SNS are also more likely to be extroverted and driven by collective social factors (Kim et al., 2010).

### SNS and users' generation

The generation to which an individual belongs influences their interests and attitudes towards technology. The generation of a user also influences their behaviors on SNS, according to research conducted by Krishen et al. (2016).

These platforms allow users to build relationships, develop skills, and express their autonomy. According to self-determination theory, the satisfaction of certain basic needs, such as competence, autonomy, and relationships, is one of the main motivations for engaging in SNS (Sheldon & Gunz, 2009). However, it is crucial to consider that the importance of these needs may vary depending on the user's generation. Generational diversity provides relevant data on the motivations underlying behavior on SNS (Krishen et al., 2016).

Millennials stand out for their extensive use of SNS, their significant contribution as a source of content and product information, and their influence on the opinions of other users (Mangold & Smith, 2012). They perceive communication technology as a constant in their lives, as they have grown up using these tools, and SNS is a crucial tool for evaluating their environment and activities. Millennials primarily use the internet as a source of information, which is reflected in their presence on a large number of SNS (Dabija et al., 2018).

By contrast, Generation X shows less intense use of SNS. At the same time, it is characterized by being more skeptical and less receptive to traditional media and marketing. Since they adopted mobile technology and SNS at a later stage in life compared to Millennials, Generation X members tend to have a more responsible use of SNS. Despite not being as skilled in using the internet and new technologies as Millennials, Generation X frequently engages with the digital world, whether for online shopping, relaxation, or expanding their knowledge (Dabija et al., 2018).

These generational differences in SNS use are likely to also be reflected in and influence the daily usage time, an idea that is tested against the first hypothesis of this study:

*H1.* There are significant differences in the daily SNS usage time between Generation X and Millennials.

## Customer loyalty. The three variables that compose it

Customer loyalty towards a brand reflects the perception and interest that customers have in that brand (Aaker, 1997). Currently, the construction of brand loyalty relies heavily on SNS (Puspaningrum, 2020) through conversations and the community or network formed with other customers or users (McKee, 2010).

According to Ferrer-Rosell et al. (2020), the creation of online brand communities is an effective tool for driving sales and retaining customers. It can be hypothesized that the intensity and frequency of such interactivity will influence the loyalty generated toward the brand.

Several factors influencing brand loyalty on SNS have been studied, including the emotions and excitement experienced while using SNS (Wang et al., 2015).

However, to the best of our knowledge, in the previous literature, there are few linkages between social media usage time and customer loyalty. According to Ahmed (2022), the intensity of social media usage, which could be interpreted as the time spent connected to these platforms, acts as a moderator of marketing actions on loyalty through social media. Nevertheless, no research has been conducted on whether the duration of SNS usage affects each of the variables that compose customer loyalty. This will be the gap filled with the second hypothesis to be tested in the present study.

In this analysis, the three most prominent variables indicating customer loyalty towards a company brand, or product are identified based on the reviewed literature.

Grace et al. (2020) assert that following a process of brand stimulus evaluation (attributes and benefits of the brand), cognitive evaluation (satisfaction), behavioral evaluation (repeat purchase), and emotional evaluation (brand commitment), the relationship of brand loyalty is ultimately reached. Moretta et al. (2019) identified the key variables influencing customer loyalty. Emotional attachment to the brand is one of them. This attachment generates an affective bond that leads consumers to trust the brand (Gustafsson et al., 2005), make repeat purchases, and recommend the brand to others (Han et al., 2008). According to authors like Iglesias et al. (2011), these behaviors contribute to brand loyalty.

In the same vein, Dávila Espuela et al. (2023) establish that the three primary variables of loyalty are Brand consumption, trust in the brand, and brand recommendation.

At this point, we reach the formulation of the second research hypothesis.

*H2.* The variable daily usage time serves as a significant predictor of loyalty generated through SNS.

## Brand consumption

All the authors studied agree that brand loyalty involves a component of repeat purchase (Reichheld & Teal, 1996; Oliver, 1997). According to the behavioral perspective of customer loyalty, loyal customers are those who continue to purchase a product over time, and their loyalty is measured through the frequency or volume of repurchasing a particular brand (Gupta & Zeithaml, 2006). Therefore, repeat purchasing is one of the fundamental pillars of brand loyalty.

In their definition of brand loyalty, Mellens et al. (1996) posit that one of the variables in the definition is expression over time, meaning that a single purchase of the product does not guarantee loyalty to the brand; it is a dynamic process that must be consistently repeated over a certain period of time.

As observed, the concept of time is employed in the definition of loyalty concerning repeat purchase; however, the usage time of SNS and the linkage of brand loyalty with that communication channel are not unified in previous research.

At this juncture, we arrive at the formulation of the next research hypothesis.

*H2.1.* The variable daily usage time serves as a significant predictor of brand consumption generated by SNS posts.

However, Jacoby and Kyner (1973) assert that a single unidimensional measure is likely to be insufficient to evaluate a phenomenon as complex and multidimensional as brand loyalty. Therefore, additional variables should be added to the concept of brand loyalty.

## Trust in the brand

The next variable under study is trust in the brand. According to Bruhn et al. (2014), a trustworthy brand image can help establish long-term relationships with customers through cooperation, and SNS can serve as an ideal channel for fostering such cooperation. Murilo (2021) also includes the concept of satisfaction as a preliminary step to affective loyalty. For Delgado-Ballester and Munuera-Alemán (2005), customer trust in a brand arises from the brand's ability to meet the customer's needs and interests, which, in turn, is based on the consumer's certainty that the product will deliver on its value promises, as well as on the consumer's trust that the brand will prioritize his or her interests. Therefore, trust in the brand can create an emotional bond between consumers and the company, which in turn can lead to customer loyalty (Erro-Garcés, 2020).

Consumers develop such trust through continuous interaction (Chen & Quester, 2015). This interaction unfolds in a more dynamic and active manner on SNS. Therefore,

references in previous literature to the linkage between this loyalty variable and SNS usage are indeed found. The gap encountered in this regard once again pertains to the inclusion of usage time in the research hypothesis. At this stage, we arrive at the development of the next hypothesis:

*H2.2.* The variable daily usage time serves as a significant predictor of trust in the brand generated by SNS posts.

### Brand recommendation

The study by Carroll and Ahuvia (2006) provides evidence that users who follow a brand on SNS are loyal to it, place their trust in it, and intend to speak positively about the brand, both within and outside of SNS. This leads to the third loyalty variable analyzed, recommendation.

Kabiraj and Shanmugan (2011) assert that the most desired level of brand loyalty is achieved when, in addition to the aforementioned variables, the customer engages in positive word-of-mouth among other clients. A loyal customer is an excellent ambassador for the company (Labajo González & Tena Blázquez, 2009). Carroll and Ahuvia (2006) further add that customers loyal to a brand tend to speak positively about it, generating positive word-of-mouth (WOM). According to Zheng et al. (2017), brand loyalty is an important precursor to recommendation. Loyal consumers actively provide feedback to the brand and their friends, and not only exchange information on SNS but also actively recommend the brand to others, generating positive advertising for the brand (Zheng et al., 2017). SNS provide a convenient channel for loyal customers to share their recommendations with friends and strangers. In fact, according to Puspningrum (2020), the central role of marketing on SNS is to encourage customers to recommend the brand to their friends and family.

If to this combination of recommendation on SNS, the underexplored concept in the business area of SNS usage time is added, we arrive at the formulation of the following hypothesis.

*H2.3.* The variable daily usage time serves as a significant predictor of brand recommendation generated by SNS posts.

### Characteristics of SNS posts

#### Relevant content

SNS represent an interesting economic model of communication with three pillars: voluntary user affiliation to SNS,

voluntary and free contribution of content, and the attention paid by a majority of users to advertising based on content tracking segmentation by SNS (Freire, 2008).

Users of SNS communities particularly value the quality of information and the relevance of content (Kim & Kim, 2017). It is necessary for companies to generate content on their SNS that not only sustains customers' interest but also stimulates users to engage in actions that lead to commercial transactions. To capture consumers' interest on SNS, it is crucial for companies to have a deep understanding of what type of content appeals to them and offer it in a timely manner. Achieving this objective requires listening to and understanding customers' needs, and providing them with the content they are anticipating in order to foster loyalty and establish a stronger connection with the brand. Customer engagement is directly impacted by the content strategies employed by companies on SNS (Gummerus et al., 2012).

Based on the information derived from previous studies, it is possible to conclude that relevant content (RC) is one of the most important characteristics of SNS posts. Therefore, by combining it with the concepts of usage time and loyalty, we arrive at the formulation of the third hypothesis to be analyzed in this paper.

*H3.* The variable daily usage time serves as a significant predictor of loyalty generated by SNS posts with RC.

#### Campaigns with benefits

At the same time, Gummerus et al. (2012) argue that users join brand communities in search of economic benefits, such as discounts or the opportunity to participate in giveaways and contests. Muntinga (2011) also points out that people consume brand content on Facebook with the expectation of receiving a reward in return, economic incentives play a fundamental role in generating eWOM among consumers on SNS. Economic incentives are a strong motivation for SNS users, which is in turn related to the dissemination of information on their own profiles.

According to Tsimonis and Dimitriadis (2014), approximately 50% of the activity carried out on companies' SNS focuses on promoting contests. This finding is in line with the conclusion of Lee et al. (2019), who demonstrate that offering incentives by a brand to share content on SNS results in a significant increase in the number of times that content is shared.

This demonstrates the strong interest of SNS users in the incentives offered by brands. There are many studies that verify that campaigns with benefits for customers are the ones that influence customer loyalty the most (Erdogmus

& Cicek, 2012), leading to the formulation of the fourth research hypothesis.

*H4.* The variable daily usage time serves as a significant predictor of loyalty generated by SNS posts with campaigns with benefits (CB).

### Popular content among friends

Additionally, according to Dabholkar and Sheng (2012), consumers tend to trust information shared by other users more than information provided by the brand itself. Therefore, it is natural for brands to seek to have their content shared by their followers on SNS to achieve greater visibility and credibility among consumers, which will significantly contribute to customer loyalty.

The viral sharing of offers and brand information through SNS generates credibility for companies (Lee et al., 2019). When a user shares content, his or her friends can in turn share it with other friends, and thus, the post spreads and travels through the social channel, potentially increasing distribution. This is undoubtedly a great benefit for brands (Quesenberry & Coolsen, 2019).

Consumers are interested in sharing brand content on their own SNS profiles because it facilitates their social interactions. Numerous studies analyzing eWOM on SNS indicate that both traditional WOM and eWOM are important sources of information for consumers, who will trust information received in this way more than that generated by brands through digital media or traditional advertising (Goldsmith & Horowitz, 2006).

For Fu et al. (2017), the motive for sharing content on SNS is the sense of accomplishment, self-expression, and camaraderie. However, for content to be shared on SNS and generate eWOM among friends, it must be interesting. The interest in the content is directly proportional to the number of times it is shared. This idea links popular content among friends (CP) with RC, another relevant characteristic of SNS posts.

Therefore, the fifth research hypothesis is proposed.

*H5.* The variable daily usage time serves as a significant predictor of loyalty generated by SNS posts with CP campaigns.

### Image quality

Analyzing the last characteristic of SNS in the study, previous literature on image quality (PQ) is identified. According to Martins et al. (2015), SNS users prefer creative posts with

more images and less text. Lavilla Raso (2017) also indicates that videos and visual content are the most effective types of posts on SNS and are more successful among users and videos are the third most used format by companies in their SNS posts, due to their ability to build a medium- to long-term relationship with users and their greater potential for being shared.

In the case of messages transmitted through SNS, the inclusion of visual media, such as photos and videos, increases the richness of the message and, therefore, the effectiveness of its transmission. This, in turn, is associated with greater consumer engagement and involvement in brand loyalty (Coursaris et al., 2016).

Previous studies have shown that attractive and media-rich messages generate greater consumer engagement and commitment. Posts that include images entice higher engagement from page followers compared to the average of all posts. It's recommended not only to use visually appealing, comforting, and attractive animations and images of celebrities, but also distinctive colors, particularly to separate design features from informational content. (Coursaris et al., 2016).

*H6.* The variable daily usage time serves as a significant predictor of loyalty generated by SNS posts with PQ.

### Summary, gaps, and research questions

Upon reviewing the literature, it becomes apparent that the relationship between SNS usage time, user generation, customer loyalty and SNS characteristics is intricate. Previous studies have highlighted how SNS usage time impacts various aspects, mostly not related to marketing. Additionally, generational differences, particularly between Millennials and Generation X, play a significant role in shaping SNS behaviors. In this context, the variables of customer loyalty, including brand consumption, trust in the brand, and brand recommendation, emerge as key components. Furthermore, the characteristics of SNS posts, such as relevant content, campaigns with benefits, popular content among friends, and image quality, have been identified as crucial factors influencing customer engagement and loyalty. Nevertheless, the relationship between all these variables remains to be undefined.

Despite the wealth of research, several gaps exist in the literature to the best of our knowledge. Firstly, there's a lack of consensus regarding the relationship between SNS usage time and its impact on customer loyalty, with few studies exploring this linkage and none of them delving into the specific variables that constitute customer loyalty such as brand consumption, trust, and recommendation.



Additionally, while generational differences in SNS usage are acknowledged, there's limited research on its daily usage and its implications for brand loyalty and its specific components. There are also few studies that relate SNS usage time to each of the characteristics of SNS posts to interpret their relationship, and therefore, how this possible mediating effect specifically impacts the variables of loyalty through each of SNS characteristics is also not studied in the previous literature.

After analysing the main findings and gaps in the previous literature, the following research questions are proposed to guide the current research inquiry:

- Firstly, are there indeed significant differences in usage time between Generation X and Millennials?
- Secondly, does daily usage time predict loyalty generated through SNS? What variables of customer loyalty are influenced by SNS usage time?
- Thirdly, which characteristics of SNS posts are affected by SNS usage time in terms of customer loyalty?

These research questions aim to address the identified gaps in the literature and provide a comprehensive understanding of the relationship between SNS usage time and customer loyalty, considering daily usage time influencing factor.

**Initial model**

Once all the study hypotheses have been identified, the initial research model is proposed (Fig. 1).

**Materials and methods**

**Data**

**Data collection**

The objective of this study is to investigate the use of SNS and its relationship with user loyalty, as well as the generational differences that arise in this interaction. To achieve this, a survey was conducted to explore the attitudes and intentions of SNS users belonging to two generations: Generation X and Millennials.

It is important to note that the starting and ending years and characteristics of each generation may vary depending on the country and the historical events they have experienced. In the case of Spain, there are different criteria and proposals regarding the time period that defines each generation. Based on the previous data, two generational groups are defined based on birth year: Generation X (1965–1980) and Millennials (1981–1999).

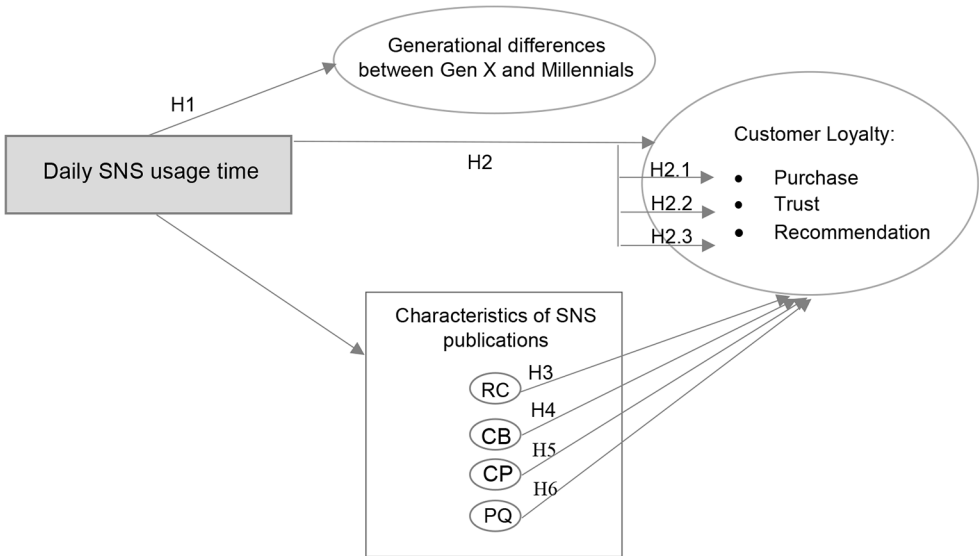
The study population consists of men and women residing in Spain who were born between 1965 and 1999 and were between 23 and 57 years old in 2022.

The target population amounts to 22,888,520 individuals (INE, 2022). Simple random sampling is used to ensure impartiality, as the 2018 IAB report did not identify any sociodemographic variables that are clearly discriminatory in terms of SNS usage in this population group.

The survey was distributed through Google Forms via various channels, including WhatsApp, Facebook, and LinkedIn (including the SurveyCircle user). This way, 485 responses were collected, providing a confidence level of 95% and a margin of error of +5%.

To conduct the data analysis, records that did not meet the established criteria for the study population were discarded.

Fig. 1 Initial model



This included individuals who did not belong to either of the two analyzed generations, those who did not reside in Spain, those who did not use SNS, and those with inconsistent responses. Thus, a final sample of 455 individuals was obtained for analysis, maintaining the necessary margin of error and confidence level for the study.

The sociodemographic profile of the respondents is as follows (Table 1):

## Variables

The survey used for this article was designed by the researchers based on existing literature in the field of study. The survey consisted of five different blocks that allowed obtaining the necessary information for the study: individual profile, SNS user profile, brand following on SNS, influence of SNS characteristics on loyalty, and classification of respondents.

In the survey used in the study, respondents were presented with examples of brand publications on SNS and were asked to identify which loyalty variables were inspired by each example. Additionally, a 5-point Likert scale variable was presented to measure the influence of each SNS publication characteristic on loyalty variables. This seeks to evaluate the impact that each characteristic of brand publications on SNS has on consumer loyalty.

**Table 1** Respondent profile

Questions	Variables	Answers	%
What year were you born?	Generation	Gen. X	49%
		Millennials	51%
What is the highest level of education you have completed?	Highest education level	Primary / no studies	0,90%
		Secondary (Baccalaureate / Vocational Training / Technical)	18,90%
		University students	63,70%
		Others	3,30%
What is your employment status?	Employment situation	Unemployed	6,60%
		Student	3%
		Employed worker	64%
		Self-employed worker	14%
		Retired	0%
What is the monthly net income level of your household?	Net monthly income for the household	Less than 1500	19,30%
		Between 1500 and 3000	38,20%
		Between 3000 and 5000	25,90%
		More than 5000	16,70%
What is your marital status?	Marital Status	Single	28,40%
		Consensual or common-law union	14,40%
		Married	50,90%
		Divorced	5,80%
		Widowed	0,50%
How many members are there in your household?	Members of the family unit	1–2 members	33,70%
		3–4 members	58,20%
		More than 4 members	8,10%

## Methodology

Firstly, it is necessary to recode some variables. The fourth block, Influence of SNS characteristics on loyalty, consists of qualitative and quantitative questions that aim to understand the relationship between different SNS publication characteristics and customer loyalty variables. It is necessary to combine the responses from different questions, for each cross of characteristics and loyalty variables, into a single quantitative variable. This facilitates subsequent statistical analysis and eliminates possible biases by sectors or other factors. This way, 12 new variables are created that combine the cross of characteristics and loyalty variables. Each is obtained by averaging the responses obtained both through the evaluation of an example and through the Likert scale. For this, the qualitative variables of the images (where the respondent must define if the example of SNS publication inspires each loyalty variable) are converted into quantitative variables by assigning a value of 1.65 (result of dividing 5 - maximum value of the Likert scale - by 3, the number of images) to each publication that inspires one of the loyalty variables. This way, the evaluations are unified and transformed into quantitative variables that can be more appropriately analyzed. These variables are: RC: consumption, RC: trust, RC: recommendation, CB: consumption, CB: trust, CB: recommendation, CP: consumption, CP: trust, CP: recommendation, PQ: consumption, PQ: trust, and PQ: recommendation.

In the testing of hypotheses 2 to 6, the variables used for the analysis are obtained by adding the values assigned with this method to each loyalty concept (purchase, trust, and recommendation) to SNS publication characteristics (RC, CB, CP, PQ). From an interpretive standpoint, it is better to use additions because they result in higher values, which provide more dispersion and, therefore, a wider range of prediction.

The internal consistency method based on Cronbach's Alpha is used to analyze the reliability of variable unification. In this case, a Cronbach's Alpha value of 0.853 has been obtained, indicating good internal consistency of the analyzed items. This suggests that the performed variable unification is an appropriate technique for the analysis of survey results.

To test the validity of the data, both exploratory and confirmatory analyses were conducted. In the exploratory analysis, within the principal components method, we applied a varimax rotation. This rotation method assumes that factors are independent of each other and minimizes the number of variables with high factorial loadings on one factor, thus simplifying the interpretation of the component matrix. In this analysis, the Kaiser-Meyer-Olkin measure of sampling adequacy yielded a value of 0.890, and Bartlett's test

**Table 2** SNS usage frequency by Generation

	Millennials		Generation X		Total frequency
	Frequency of generation in the option	Frequency in the generation	Frequency of generation in the option	Frequency in the generation	
< 1 h	33,30%	10,80%	66,70%	22,60%	16,70%
1–2 h	51,20%	56,80%	48,80%	56,50%	56,65%
3–5 h	62,40%	28,60%	37,60%	18,10%	23,35%
> 5 h	58,30%	3,80%	41,70%	2,80%	3,30%

of sphericity was significant. Additionally, there are four components with eigenvalues greater than 1, accounting for 76.115% of the total variance explained by these four components. These four components are: RC, CB, CP and PQ. In the confirmatory factor analysis conducted using the AMOS extension of SPSS, a Comparative Fit Index (CFI) of 0.961 and Root Mean Square Error of Approximation (RMSEA) of 0.043 were obtained, with a 90% confidence interval ranging from 0.031 to 0.055.

To test the first hypothesis, the independence test is used, contrasting the existence or absence of a statistical link between the generation variable and SNS usage time. Since the aim is to test the independence between two qualitative variables, the Chi-square test is applied with a confidence level of 95.

To test the remaining hypotheses, multiple regression tests are employed. The most commonly used method for determining optimal coefficients in a regression model is the Least Squares Criterion.

## Findings

### Findings related to differences between Generation X and millennials

The frequency data of daily SNS usage time are presented below, based on generational affiliation, a variable used to test H1 (Table 2).

Hereafter, the Chi-square test is conducted for the variables of daily usage time and generation. The Pearson chi-square value is 12.139. The p-value of the chi-square test for independence is significant ( $0.007 < 0.05$ ), thus, at a 95% confidence level, the hypothesis of dependence between the variables can be accepted. This means that there are significant differences in daily SNS usage time between Generation X and Millennials. Therefore, H1 is accepted. Thus, generational differences in SNS use presented in “[SNS and users’ generation](#)” section, are also reflected in the daily usage time.

**Table 3** Descriptive statistics of SNS publication characteristics variables and loyalty variables

	Mean	Standard Deviation
CONSUMPTION	7,9775	4,05329
TRUST	5,7962	3,15422
RECOMMENDATION	5,7749	3,21788
RC	5,2919	2,72275
CB	5,195	2,74835
CP	3,9186	2,59863
PQ	5,1432	2,86319

### Analysis of hypotheses H2 to H6

In the following hypotheses, in addition to the usage time variable (independent variable), the three loyalty variables and the four characteristics of SNS publications analyzed in the study are involved. Descriptive statistics of the variables that are used to obtain the new variables are shown below (Table 3).

To test the remaining hypotheses of the study, the relationship between variables is examined through multiple regressions. Backward Regression Modeling is employed in the following regressions, where unsuitable variables are eliminated, leaving only the predictor variables in the final step, given the small sample size. The use of appropriate modeling techniques in non-panel databases, such as the backward regression model, can help reduce the risk of finding spurious relationships in the model.

In some disciplines that attempt to predict human behavior, the R-squared value is often low, indicating a higher complexity in predicting human behavior compared to other areas. As for ANOVA, this statistical technique is utilized to determine if there is a significant difference between the means of two or more groups on a dependent variable. The existence of such a difference signifies that the independent variable significantly contributes to explaining the dependent variable.

### Findings related to loyalty variables

As observed in the preceding table, the independent variable daily usage time is significant at the 1% level for the dependent variables consumption (H2.1), trust (H2.2), and recommendation (H2.3). This means that the daily usage



time variable serves as a significant predictor of loyalty generated through SNS, as it predicts both brand consumption and trust in the brand, as well as recommendations, which are the three loyalty variables as outlined in “[Customer loyalty. The three variables that compose it](#)” section.

Based on the previous results, it is concluded that H.2, including H2.1, H2.2, and H2.3, is accepted.

### Findings related to posts with RC

In Table 4, it is observed that the independent variable daily usage time is the only one that remains in Model 7, being significant at 1%.

Hence, daily usage time serves as a significant predictor of loyalty generated through SNS publications with RC, which is one of the SNS main characteristics as explained in “[Relevant content](#)” section. Thus, H3 is accepted.

### Findings related to posts with CB

Once again, we note from the preceding table that the independent variable daily usage time is the sole factor retained in Model 7 when focusing on the dependent variable CB. Similarly, in this instance, it maintains significance at the 1% level.

Consequently, daily usage time emerges as a substantial predictor of loyalty fostered through SNS publications featuring CB. Therefore, H4 is also accepted. Hence it is also confirmed that brand loyalty generated through SNS publication with characteristics discussed in “[Campaigns with benefits](#)” section, is linked to daily usage time.

### Findings related to posts with CP

To contrast H5, we need to examine Table 4, specifically the data pertaining to the dependent variable CP described in “[Popular content among friends](#)” section. In this case, the independent variable daily usage time also appears as the sole predictor in Model 7, at a significance level of 5%.

Hypothesis 5 is also accepted, but with a significance level of 5%, indicating that the probability of the observed result being due to chance is higher compared to the other accepted hypotheses. Therefore, daily usage time is also a significant predictor of loyalty generated through CP campaigns, albeit to a lesser extent.

### Findings related to posts with PQ

Regarding Hypothesis 6, we need to focus on the last section of Table 4, where the dependent variable is PQ. It is noted that in Model 7, only the independent variable daily usage time remains, but in this case, it is not significant.

Hypothesis 6 must be rejected, implying that the effectiveness of quality image campaigns in fostering loyalty, outlined in “[Image quality](#)” section, cannot be predicted based on daily SNS usage time.

### Resulting model

Based on the findings presented and the analysis conducted, it is evident that there is a need to remove the PQ variable from the initial model, as Hypothesis 6 is not accepted. Consequently, among the defined characteristics of SNS publications in the initial model (“[Initial model](#)” section), one less variable will be included.

These outcomes effectively address the gap in the linkage between all the variables discussed, as proposed in the introduction, through the subsequent model generated by hypothesis testing (Fig. 2).

### Discussion

This study is comparable to others because part of its content has been extensively studied in previous literature. However, to the best of our knowledge, studies based on SNS usage time do not provide information about what people do or see on SNS (Van Driel et al., 2022). This study precisely adds useful information about content and customer loyalty to such analyses on usage time, thus bridging the gap between SNS usage time and loyalty detected by Kuss and Griffiths (2011). Specifically, this research represents an extension of the model proposed by Dávila Espuela et al. (2023), which does indeed link the relationship between the characteristics of SNS posts with customer loyalty, but addresses the existing gap in that research regarding the influence of daily usage time and individual generation.

Expanding upon the initial exploration, the study focuses on several hypotheses, each building upon established research findings.

Firstly, H1 examines generational differences in SNS usage behavior. In this analysis, it can be considered consistent with previous studies that identify attitudinal differences among different generations toward SNS. Generations exhibit different technological behaviors and attitudes due to their varying technological inclusion (San-Martín et al., 2015). Specifically, regarding usage time, the difference between Generation X and Millennials has been previously contrasted (Mangold & Smith, 2012). Krishen et al. (2016), also in line with this research, assert that Millennials are characterized by highly frequent SNS usage in contrast to members of Generation X, which exhibit less frequent usage.

**Table 4** Multiple regressions

Model Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
<b>Dependent variable CONSUMPTION</b>							
Daily usage time	0,189* (0,657)	0,19* (0,652)	0,195* (0,625)	0,198** (0,620)	0,206** (0,592)	0,207*** (0,589)	0,206*** (0,586)
Generation	- 0,203 (1,355)	- 0,204 (1,346)	- 0,222** (1,030)	- 0,218** (1,016)	- 0,222** (0,997)	- 0,224*** (0,991)	- 0,227*** (0,984)
Gender	- 0,19 (1,133)	- 0,197* (1,044)	- 0,192* (1,012)	- 0,197* (0,996)	- 0,197* (0,991)	- 0,195* (0,985)	- 0,204** (0,966)
Family unit members	- 0,042 (0,831)	- 0,038 (0,802)	- 0,04 (0,794)	- 0,043 (0,785)	- 0,055 (0,716)	- 0,044 (0,692)	
Highest level of education	0,04 (0,928)	0,043 (0,901)	0,043 (0,895)	0,047 (0,883)	0,046 (0,877)		
Marital status	- 0,029 (0,620)	- 0,031 (0,614)	- 0,037 (0,591)	- 0,03 (0,578)			
Employment status	0,032 (0,767)	0,035 (0,755)	0,031 (0,740)				
Age	- 0,032 (0,114)	- 0,032 (0,113)					
Monthly household income	0,017 (0,505)						
ANOVA	1,008	1,146	1,321	1,547	1,866*	2,311**	3,055***
R2	0,107	0,106	0,106	0,105	0,104	0,102	0,101
<b>Dependent variable TRUST</b>							
Daily usage time	0,232*** (0,434)	0,226*** (0,43)	0,223*** (0,428)	0,201** (0,409)	0,217*** (0,405)	0,189** (0,385)	0,202*** (0,383)
Monthly household income	0,265*** (0,307)	0,256*** (0,301)	0,242*** (0,294)	0,251*** (0,291)	0,238*** (0,289)	0,235*** (0,289)	0,235*** (0,289)
Family unit members	- 0,249*** (0,532)	- 0,239*** (0,522)	- 0,253*** (0,512)	- 0,252*** (0,51)	- 0,24*** (0,508)	- 0,199** (0,463)	- 0,197** (0,463)
Non-brand following	0,111 (0,18)	0,109 (0,179)	0,114 (0,178)	0,12 (0,176)	0,112 (0,176)	0,112 (0,176)	
Marital status	0,108 (0,406)	0,1 (0,4)	0,098 (0,399)	0,122 (0,382)	0,101 (0,376)		
Generation	- 0,189 (0,881)	- 0,189 (0,876)	- 0,183 (0,871)	- 0,11 (0,626)			
Age	0,13 (0,073)	0,117 (0,072)	0,115 (0,071)				
Highest level of education	- 0,067 (0,605)	- 0,072 (0,6)					
Employment status	- 0,053 (0,503)						
ANOVA	1,611*	1,804**	2,016**	2,288***	2,538***	2,999***	3,609***
R2	0,16	0,158	0,153	0,148	0,137	0,129	0,117
<b>Dependent variable RECOMMENDATION</b>							
Daily usage time	0,259*** (0,433)	0,263*** (0,425)	0,263*** (0,423)	0,241*** (0,406)	0,237*** (0,404)	0,24*** (0,402)	0,252*** (0,399)
Non-brand following	0,097 (0,188)	0,095 (0,187)	0,092 (0,186)	0,093 (0,185)	0,098 (0,184)	0,098 (0,184)	
Monthly household income	0,094 (0,317)	0,092 (0,314)	0,081 (0,307)	0,083 (0,306)	0,067 (0,297)		
Highest level of education	- 0,08 (0,625)	- 0,077 (0,618)	- 0,08 (0,614)	- 0,072 (0,61)			
Marital status	0,093 (0,375)	0,09 (0,37)	0,08 (0,364)				
Employment status	- 0,058 (0,516)	- 0,062 (0,505)					
Generation	- 0,024 (0,676)						
ANOVA	1,13	1,327	1,544	1,812*	2,289**	3,26***	5,678***
R2	0,092	0,092	0,088	0,082	0,077	0,073	0,063
<b>Dependent variable RC</b>							
Daily usage time	0,269*** (0,36)	0,247*** (0,34)	0,245*** (0,339)	0,219*** (0,322)	0,217*** (0,32)	0,227*** (0,317)	0,232*** (0,318)
Monthly household income	0,155 (0,252)	0,163 (0,249)	0,149 (0,242)	0,147 (0,241)	0,133 (0,236)	0,134 (0,235)	
Non-brand following	0,083 (0,149)	0,09 (0,148)	0,086 (0,147)	0,087 (0,147)	0,085 (0,146)		
Family unit members	- 0,114 (0,433)	- 0,116 (0,431)	- 0,105 (0,424)	- 0,069 (0,387)			

**Table 4** (continued)

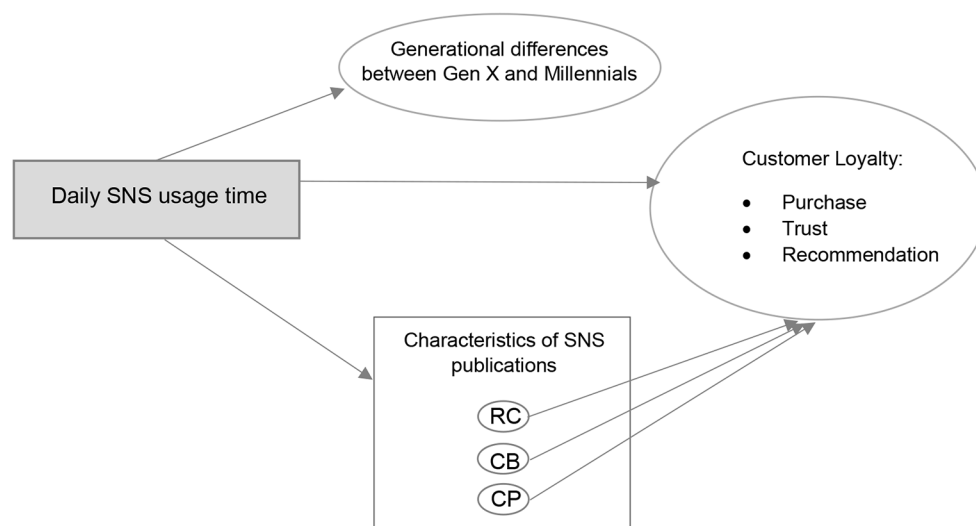
Model Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Marital status	0,085 (0,337)	0,106 (0,323)	0,09 (0,314)				
Employment status	- 0,08 (0,417)	- 0,064 (0,405)					
Age	0,075 (0,044)						
ANOVA	1,203	1,356	1,575	1,841*	2,337**	3,203***	4,772***
R2	0,097	0,093	0,09	0,083	0,079	0,072	0,054
<b>Dependent variable CB</b>							
Daily usage time	0,222*** (0,38)	0,222*** (0,377)	0,215*** (0,371)	0,215*** (0,369)	0,219*** (0,367)	0,231*** (0,363)	0,256*** (0,357)
Generation	- 0,147 (0,64)	- 0,15 (0,634)	- 0,133 (0,591)	- 0,143 (0,577)	- 0,136 (0,572)	- 0,129 (0,569)	
Non-brand following	0,096 (0,168)	0,095 (0,167)	0,094 (0,166)	0,092 (0,165)	0,092 (0,165)		
Monthly household income	0,065 (0,304)	0,055 (0,29)	0,07 (0,273)	0,061 (0,267)			
Employment status	- 0,053 (0,458)	- 0,051 (0,454)	- 0,048 (0,451)				
Gender	- 0,04 (0,679)	- 0,05 (0,653)					
Family unit members	- 0,034 (0,458)						
ANOVA	1,221	1,426	1,698	2,096**	2,707***	3,696***	5,911***
R2	0,099	0,098	0,096	0,094	0,09	0,082	0,066
<b>Dependent variable CP</b>							
Daily usage time	0,22*** (0,401)	0,198** (0,385)	0,198** (0,384)	0,205** (0,381)	0,2*** (0,383)	0,221*** (0,383)	0,197** (0,377)
Gender	- 0,13 (0,701)	- 0,132 (0,699)	- 0,15 (0,677)	- 0,181* (0,629)	- 0,193* (0,632)	- 0,126 (0,589)	
Generation	- 0,187* (0,656)	- 0,173 (0,646)	- 0,178* (0,642)	- 0,18* (0,639)	- 0,176 (0,644)		
Highest level of education	- 0,168 (0,585)	- 0,166 (0,583)	- 0,178* (0,572)	- 0,157 (0,548)			
Monthly household income	0,101 (0,317)	0,096 (0,315)	0,08 (0,306)				
Family unit members	- 0,105 (0,52)	- 0,07 (0,475)					
Marital status	0,088 (0,373)						
ANOVA	1,508	1,684	1,961*	2,351***	2,368**	2,384**	3,402***
R2	0,119	0,113	0,109	0,104	0,08	0,054	0,039
<b>Dependent variable PQ</b>							
Daily usage time	0,196** (0,411)	0,203** (0,408)	0,197** (0,406)	0,144 (0,384)	0,166* (0,377)	0,16 (0,378)	0,166 (0,379)
Monthly household income	0,122 (0,314)	0,136 (0,309)	0,168* (0,286)	0,183** (0,286)	0,17* (0,284)	0,144 (0,28)	
Family unit members	- 0,13 (0,484)	- 0,137 (0,48)	- 0,162 (0,459)	- 0,14 (0,456)	- 0,137 (0,456)		
Generation	- 0,272** (0,861)	- 0,274** (0,858)	- 0,258** (0,847)	- 0,113 (0,604)			
Age	0,168 (0,07)	0,193 (0,068)	0,219 (0,067)				
Gender	- 0,096 (0,716)	- 0,098 (0,713)					
Employment status	0,081 (0,482)						
ANOVA	1,384	1,541	1,749	1,72	1,939	2,105	2,373
R2	0,111	0,105	0,099	0,078	0,066	0,048	0,027
N	455	455	455	455	455	455	455

\* Significant at 10%

\*\* Significant at 5%

\*\*\* Significant at 1%

Fig. 2 Resulting model



Subsequently, H2 explores the relationship between SNS usage and customer loyalty, drawing upon existing literature that underscores the significance of online interactions in fostering brand loyalty. The data from this analysis are consistent with previous research that suggests customer loyalty can be developed through SNS. Online interactions have led to an increased density of connections potentially strengthening the relationships (Belzunegui-Eraso et al., 2013). However, while previous studies have treated loyalty as a broad concept, this research delves deeper by investigating specific loyalty components, including (re)purchase behavior, trust, and recommendation.

Companies find SNS to be a communication channel where they can optimize financial and other resources, and where, by defining their campaigns and content effectively, they can achieve reliable loyalty outcomes. Companies use their SNS communities to foster customer loyalty (Kaur et al., 2020), as they are a perfect alternative to traditional loyalty programs (He et al., 2019) fostering loyalty through individuals' affinity (Krishen et al., 2015). However, these studies treat loyalty as a generic concept, while this research delves into the three variables of (re)purchase, trust, and recommendation that compose it, with sub-hypotheses under H2.

By adding the usage time variable to the analysis, consistency is found again with other studies that verify the influence of this variable on loyalty through SNS. Hoffman and Fodor (2010) argue that prolonged exposure to SNS can lead to higher loyalty.

If we delve into the (re)purchase loyalty variable (H2.1), Porto et al. (2016) state that increased interaction time between brands and customers on SNS can increase sales volumes, as is also asserted by Vargo et al. (2008). However, this study is not consistent with research by Menegatti et al. (2017), as the latter claims that connection duration to SNS

alone does not affect purchase behavior, while H2.1 in this research confirms that the daily usage time variable serves as a significant predictor of brand consumption generated by SNS publications.

Regarding the trust loyalty variable (H2.2), consistent claims with the results of this research are once again found in previous literature, such as Barros (2010), who states that increased interaction on SNS leads to higher trust between customers and companies. Quevedo-Silva et al. (2016) also arrive at this conclusion, asserting that greater interactivity provides consumers with a greater sense of security and trust. This is also affirmed by the study of Kim and Kim (2017).

There is a gap in the previous literature regarding the link between usage time and brand recommendation (H2.3). This study complements the existing literature in confirming this relationship.

When it comes to H3, H4, H5 and H6, regarding the characteristics of SNS that generate loyalty, this study is consistent with previous ones in terms of the selection of these characteristics, such as RC related to H3 (Ferrer-Rosell et al., 2020), CB related to H4 (Banerjee & Chua, 2019), CP related to H5 (Dabija et al., 2018), and PQ related to H6 (Ponnnavolu, 2000). However, there is again a gap regarding the connection between loyalty generated through these SNS publication characteristics and usage frequency. This study contributes to the existing literature by confirming that this variable is a significant predictor of loyalty generated through publications, particularly with RC and CB.

Once each of the variables related to the corresponding tested hypothesis in this research has been analyzed, a comprehensive conclusion is drawn. The overall conclusions of this research lead to the affirmation that connection time serves as an important predictor of loyalty, and thus SNS agencies should strive to find out when and why members of

brand communities spend more time on their websites. This conclusion is consistent with the study by Kim and Kim (2017). Based on the results of this study, it is possible to conclude that one of the reasons for dedicating more time to SNS connection is belonging to the Millennial generation.

## Theoretical and practical contributions

This study significantly contributes to the existing literature by uniquely exploring the usage time of social media as a predictor of customer loyalty, thereby adding substantial value to the theory of customer loyalty. It advances the understanding of how RC, CB, and CP mediate the relationship between SNS usage time and loyalty. By integrating these constructs into a cohesive model, the study offers a nuanced perspective on the mechanisms through which social media publications influences customer loyalty. Furthermore, the findings support and extend existing theories on consumer behavior and loyalty by demonstrating that increased SNS usage time enhances RC, CB, and CP, which subsequently positively affect customer loyalty.

The cohesion of these concepts into a single model and the positive relationship between them, as well as the discarded variables from the initial model, represent a significant advancement in the theory of customer loyalty and understanding its relationship with SNS publication characteristics.

From a practical standpoint, this research furnishes actionable insights for marketing practitioners and corporate leaders, particularly concerning the role of social media usage time. It highlights the importance of increasing the use of RC, CB, and CP contents through targeted social media strategies to enhance customer loyalty. Companies are encouraged to create content that strengthens the emotional bonds between the brand and its customers, that is, content with the aforementioned characteristics. Once marketing experts identify the types of content they should create to increase their clients' social media engagement time, they will be better positioned to optimize user loyalty on these platforms. These practical implications are vital for companies seeking to leverage social media as a tool to enhance customer retention, which can be considered crucial in the current context.

Upon discovering and demonstrating this intriguing connection between usage time linked with generation, content with RC, CB, and CP, and customer loyalty, educators specializing in digital marketing and business studies should integrate these findings into their teaching curricula. This integration should encourage future marketing professionals to implement actions that incorporate this knowledge, enabling them to design social media strategies with a

higher likelihood of success in customer loyalty based on specific segmentations.

By demonstrating that the usage time of social media significantly influences customer loyalty through RC, CB, and CP, the study provides a robust framework applicable to different industries and demographic groups. Given the pervasive use of social media across different sectors, and considering that the sample used for the analysis is statistically representative of the population under study, we can conclude that these results can be generalized to other contexts where customer engagement and loyalty are critical.

## Limitations and future research

The findings of this study highlight significant generational differences in social media usage time and its impact on customer loyalty, which align with existing literature but also extend it in meaningful ways. For instance, Krishen et al. (2016) and Dabija et al. (2018) confirm that Millennials spend more time on social media compared to Generation X. Meanwhile, our results support the idea that increased social media usage time enhances customer loyalty, this reinforces the idea that generational factors play a critical role in shaping digital behaviors, as also noted by Calvo-Porrall and Pesqueira-Sanchez (2020). Nevertheless the sample was limited to Millennials and Generation X, potentially restricting the generalizability of the findings. Future studies should expand the demographic scope to include younger and older generations, such as Generation Z, to understand if these patterns hold across different age groups. This would provide a more comprehensive view of generational differences in social media behavior and loyalty.

Furthermore, this study does not account for the peculiarities of each SNS and the differences in usability among them, which may result in the employability of different types of marketing campaigns by brands. Previous research has shown that different SNS have unique user interfaces and functionalities that can significantly influence user engagement and behavior (Phua et al., 2017). This limitation suggests that the findings related to social media usage time and customer loyalty might vary across different platforms. Hence, further research is recommended to identify the possible substantial differences among various SNS. By examining these differences, future studies could provide more tailored insights into how brands can optimize their marketing strategies for each specific platform, ultimately enhancing customer loyalty. This approach would extend the current literature by offering a more granular understanding of social media marketing effectiveness across different SNS, addressing a gap highlighted in this study.



## Conclusions

The main contribution of this article stems from the influence that daily SNS usage time has on customer loyalty through this channel, specifically in relation to the different publication characteristics.

In response to the research questions posed in the introduction, it can be confirmed that the daily usage time variable serves as a predictor of loyalty generated through SNS.

The results of this article suggest that there are differences in usage time between Generation X and Millennials, and that the usage time variable effectively serves as a significant predictor of loyalty generated through SNS and its three constituent variables (purchase, trust, and recommendation), especially in loyalty generated through SNS with RC and CB. This is also valid to a lesser extent with CP, and it does not serve as a predictor of loyalty generated through SNS publications with PQ.

From a logical standpoint, this implies important practical considerations for marketing executives who wish to initiate a loyalty campaign on SNS. Customer loyalty is a key objective for any company. To achieve this goal, it is important for marketing professionals to dedicate time and effort to creating publications that attract and maintain customer interest. It is recommended that practitioners begin by clearly defining their target audience, as the amount of time individuals spend on SNS varies depending on their generational affiliation.

The time spent (and, therefore, the generation) will guide professionals regarding the type of publications they should create to achieve the loyalty objective. Publications that include RC and CB may have a significantly greater impact on the loyalty of customers who spend more time connected (Millennials) than other types of publications. Therefore, marketing professionals should prioritize the creation of content that resonates with the specific preferences and behaviors of each generational cohort.

By aligning publication strategies with the time spent and generational preferences of the target audience, marketers can enhance the efficacy of their loyalty campaigns on SNS. Ultimately, this nuanced approach not only fosters stronger customer relationships but also maximizes the impact of marketing efforts in driving long-term brand loyalty.

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preparation: Nélica Dávila Espuela; Writing - review and editing: Maria Dolores Reina Paz, Amaya Erro Garcés; Funding acquisition: Maria Dolores Reina Paz; Resources: Maria Dolores Reina Paz; Supervision: Maria Dolores Reina Paz, Amaya Erro Garcés; Project Administration: Amaya Erro Garcés; Software: Nélica Dávila Espuela, Amaya Erro Garcés; Validation: Maria Dolores Reina Paz, Amaya Erro. All authors read and approved the final manuscript.

**Data availability** The data that support the findings of this study are available from the corresponding author upon request.

**Conflict of interest** The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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