VISUAL REVIEW | Vol. 18, No. 6, 2026 | ISSN 2695-9631
International Visual Culture Review / Revista Internacional de Cultura Visual
https://doi.org/10.62161/revvisual.v18.5969

VISUAL COMMUNICATION ON SOCIAL MEDIA AND CUSTOMER SATISFACTION IN DIGITAL COMMERCE:
Evidence from a Peruvian Biomedical Sector Company

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KEYWORDS
Digital visual communication
Social media
Digital commerce
Customer satisfaction
Brand identity
Customer experience
Social commerce

ABSTRACT
This study examines the relationship between the use of social media as a sales channel and customer satisfaction in a Peruvian company operating in the biomedical sector. Employing a quantitative approach, significant associations were identified between the performance of the digital sales channel and key dimensions of customer experience, including perceived service quality, customer loyalty, brand identity, and symbolic interaction in digital environments. The findings indicate that social media, beyond their purely commercial function, play a significant role in strengthening company–customer relationships by influencing service evaluation and fostering trust in digital commerce contexts.

Received: 29/ 07 / 2025
Accepted: 11/ 02 / 2026

1. Introduction

The COVID-19 pandemic accelerated the digital transformation in companies, driving them to rapidly incorporate tools such as e-commerce and social media to ensure operational continuity and maintain customer relationships (Sánchez & Sánchez, 2017; Cordova-Buiza et al., 2024). This adaptation, although in many cases improvised, enabled the implementation of processes such as online payments and orders, thereby improving communication with consumers in an efficient and low-cost manner across various sectors (Liao et al., 2017; Deza-De-Souza-Ferreyra et al., 2025).

In this context, small and medium-sized enterprises (SMEs) identified social media as an effective channel for interacting with their target audience, expanding their reach and reducing contact costs without the need to invest in traditional advertising (Garzón et al., 2021; Gallardo-Tello, 2024). These platforms facilitate immediate communication, constant updates and contribute to brand positioning (Oviedo et al., 2015; Hernández-Sellés et al., 2022). Furthermore, they have evolved from being mere channels for corporate projection to becoming active sales channels through promotional campaigns featuring discounts and special offers (Li et al., 2020; Toribio-Tamayo et al., 2024).

The professional use of social media by SMEs represents a well-established trend. For instance, in Spain, 80% of small businesses use Facebook for commercial purposes, 65% employ Instagram, 31% use Twitter and 27% utilise YouTube (Gayle, 2023), according to data from the Observatorio de Digitalización (2021). These platforms not only enable product promotion but also allow the collection of key information to support marketing decision-making.

In Latin America, however, the pandemic highlighted significant structural weaknesses in SMEs, such as low productivity and limited technology adoption (Huamaní et al., 2022; Oliveira et al., 2023; Hernandez-Padilla et al., 2023). In the Peruvian case, the quarantine exposed the limited digital preparedness of many companies; indeed, in 2018, only 18% of companies in the region used digital sales channels, according to ECLAC. Overcoming this gap requires sustained investment in training and innovation, in addition to tax payments aimed at supporting the Peruvian economy (Alacute, 2019; Huerta-Tantalean et al., 2024). In response to this scenario, various Peruvian companies distributing medical equipment have opted to adopt social media as their primary sales and communication channel, achieving positive economic results. Nevertheless, this trend also underscores the need to strengthen internal capabilities in innovation and digital management (Yupanqui-Castillo et al., 2024).

2. Literature Review

Social media platforms have ceased to be merely tools for personal interaction and have become key instruments in companies' commercial strategies. Nowadays, they not only enable increased brand visibility but also allow active integration into sales processes, customer service, and loyalty-building efforts. Kotler and Armstrong (2019) emphasise that modern marketing requires the establishment of lasting and meaningful relationships with customers, with social media serving as a fundamental channel for achieving this. In this context, it is essential to recognise that social media are not solely commercial tools but spaces where a digital visual culture is configured. According to authors such as Mirzoeff (2015) and Manovich (2020), the digital images, symbols, and aesthetics circulating in these environments are not neutral; rather, they construct meanings, identities, and affective bonds with audiences. Consequently, the analysis of digital commerce must consider how these visual representations influence consumer perception and their relationship with brands.

For small and medium-sized enterprises (SMEs), these platforms represent an efficient means of expanding commercial reach, reducing operational costs, and delivering more dynamic user experiences. Garzón et al. (2021) argue that social media configure an environment of digital visual communication, where interactions between company and customer are articulated through images, graphic styles, audiovisual formats, and visual representations of corporate identity; meanwhile, Cachero and Vázquez (2021) contend that these platforms strengthen service perception by enabling content personalisation and real-time communication. A report from Smart Insights (2025) indicates that more than 63% of the world's population uses social media daily, underscoring their strategic relevance for brands. Likewise,

Chimezie et al. (2019) highlight that SMEs incorporating tools such as WhatsApp, Facebook, and Instagram report notable increases in both sales and customer loyalty.

The variable of social media as a sales channel is grounded in the concept of digital engagement, understood as the degree of emotional and cognitive commitment that consumers develop towards a brand in digital environments (Mihashiro-Santamaria et al., 2024). Calder et al. (2018) and Vasquez-Reyes and Cordova-Buiza (2024) propose that engagement on social media is built through constant, relevant, and bidirectional interactions, which in turn strengthen the company-customer relationship.

Various empirical studies have demonstrated that the strategic adoption of social media positively impacts companies' commercial and relational performance. In particular, Qalati et al. (2022) maintain that the relational capacity of social commerce acts as a mediating factor in competitive performance among SMEs, while Ladeira et al. (2025), based on a meta-analysis, conclude that the use of social media strengthens online trust and promotes customer loyalty.

The dimensions comprising this variable include interaction, understood as the frequency and quality of communication; value content, associated with the dissemination of useful publications, promotions, and demonstrations; accessibility, referring to the ease of making enquiries, orders, or payments; and trust, linked to perceptions of security and credibility. In this regard, Ladhari et al. (2017) note that trust constitutes a key factor in purchasing decisions, particularly in digital contexts where the customer cannot physically interact with the product or service. Furthermore, Halligan and Shah (2020) argue that, within the framework of inbound marketing, companies must generate relevant content that attracts the consumer without interruption, thereby reinforcing perceptions of value and fostering the construction of stronger relationships. Complementarily, Bui et al. (2023), drawing on a meta-analysis of engagement, demonstrate that the emotional and behavioural outcomes generated on social media directly influence customer loyalty.

The variable of customer satisfaction has been defined by Kotler and Armstrong (2019) as the outcome of comparing the perceived performance of a product or service with the consumer's expectations. When performance exceeds expectations, satisfaction is generated, which increases the likelihood of loyalty and repurchase. Talukder et al. (2025) reported a correlation of 0.963 between participation in social media and loyalty in the hotel sector. Moreover, an analysis by ACSI (2024) reveals that user satisfaction with social platforms improved by 1% to reach 74/100, indirectly boosting positive service perceptions.

The variable of customer satisfaction is analysed through four main dimensions: perceived quality, understood as the service's ability to meet expected standards; purchase experience, encompassing both rational and emotional aspects of the process; added value, related to additional benefits not anticipated by the customer; and loyalty, understood as the customer's commitment, reflected in their intention to repurchase and recommend. In this sense, Yang and Lee (2022) indicate that a satisfactory digital experience exerts a significant effect on customer loyalty, particularly in e-commerce contexts and purchases mediated by social media. This relationship is reinforced by the contributions of Cachero and Vázquez (2021), who highlight that personalisation and direct interaction with the customer contribute to improving service perception and strengthening the overall evaluation of the experience.

In the Latin American context, Barros et al. (2020) report that 95% of SMEs globally recognise that tools such as WhatsApp, Facebook, and Instagram have contributed significantly to the growth of their businesses. Likewise, Business Insider (2024) indicates that 20% of the revenue generated during Cyber Monday in the United States originated from links shared by influencers, reinforcing the role of digital mediation in purchasing decisions. Finally, Forbes (2024) underscores that the ability to complete purchases with a single click from visual content integrated into social media constitutes one of the key factors in contemporary social commerce.

Various empirical studies have addressed the relationship between social media use and customer satisfaction, evidencing significant advances in understanding this phenomenon across different sectors. Alacute (2019), in research applied to the company Colección LIA E.I.R.L., identified a positive correlation between social media marketing strategies and improvements in customer experience. The study, of quantitative and correlational design, highlighted the importance of coherent and sustained digital communication in strengthening service perception.

In the European context, Alaimo et al. (2022) evaluated consumer satisfaction levels during online food purchases amid the COVID-19 pandemic, concluding that a strategic digital presence contributes significantly to elevating loyalty levels, particularly in scenarios of high uncertainty. Complementarily, Saffana et al. (2023) analysed the live shopping modality on Instagram and found that real-time interaction improves service perception, reinforces closeness with the customer, and generates higher overall satisfaction levels.

In the Latin American context, Vasquez-Reyes and Cordova-Buiza (2024) reported that, in the pet food sector in Peru, inbound marketing actions on social media are significantly related to increases in online sales ($r = 0.66$; $p < 0.05$), confirming the strategic value of active digital management. Similarly, Wattoo et al. (2023) evidenced in the hospital sector that perceived service quality and social media interaction positively influence purchase intention ($r = 0.963$). On the other hand, Saffanah et al. (2022) demonstrated that the immersive experience and sense of presence generated during live broadcasts via Instagram can induce real purchasing behaviours among users.

Based on this review, it can be affirmed that there exists an increasingly consolidated theoretical and empirical foundation regarding the role of social media in customer satisfaction. Nevertheless, significant gaps persist in the literature, particularly in contexts such as the Peruvian one, where the digital transformation of small and medium-sized enterprises still faces structural challenges. Likewise, specialised sectors such as medical equipment distribution have been scarcely addressed from an applied perspective. In this regard, the present study seeks to contribute to closing this gap by empirically and contextually analysing how the use of social media is associated with customer satisfaction in a company from the biomedical sector, under a quantitative approach and with strategic implications for commercial management.

3. Objective and Hypothesis

The general objective of this research is to determine the relationship between the use of social media as a sales channel and customer satisfaction in a medical equipment distribution company located in Lima, Peru. The study aims to analyse how digital interactions, payment methods, accessibility, and the perception of security provided by these platforms influence the overall perception of the service, as well as specific dimensions linked to the purchase experience, customer loyalty, service quality, and the company's corporate identity.

Based on this formulation, the study's general hypothesis is proposed, which posits that there is a significant relationship between the use of social media as a sales channel and customer satisfaction in the analysed context. This hypothesis is grounded in the assumption that greater commercial activity on social media, when managed strategically, can enhance customers' positive perception of the services offered by the company. From this, the following specific hypotheses are formulated: (1) there is a significant relationship between digital communication through social media and the perception of service quality; (2) the payment methods offered via social media are significantly related to the purchase experience; (3) the purchasing facilities provided by these platforms, such as rapid attention and accessibility, are significantly associated with customer loyalty; and (4) the perceived security in transactions conducted on social media significantly influences customer trust towards the company.

4. Methodology

This study adopts a quantitative and correlational approach, which enables the scientific and numerical evaluation of data and the delineation of relationships between the variables under investigation. The research is based on a non-experimental, cross-sectional design, in which phenomena are observed as they occur in their natural context, without intentional manipulation of the variables, thereby allowing analysis of their relationships at a specific point in time.

The study population was finite and comprised 150 customers of a medical equipment distribution company located in Lima, including both individuals and legal entities, identified from the company's internal records, which provided a clearly delimited population framework. To determine an appropriate sample size for the analysis, Yamane's (1964) formula was applied, considering a 5% margin

of error, resulting in a sample size of 109 participants. The selection of respondents was carried out from among the available customers who agreed to participate in the study, yielding a total of 109 complete and valid questionnaires, which were used for the statistical analysis.

The inclusion criteria were as follows: being an active customer of the company, residing in Metropolitan Lima, making frequent purchases, and using social media to communicate with the company or place orders. Customers who did not reside in Lima, who did not use social media as a purchasing channel, or who were new customers without a verifiable consumption history were excluded.

The data collection technique employed was the survey. The instrument applied was a structured questionnaire administered virtually through the Google Forms platform. This questionnaire was designed using a five-level Likert-type scale: 5 (Always), 4 (Almost always), 3 (Sometimes), 2 (Rarely), and 1 (Never). It consisted of 19 items organised according to the dimensions and indicators of the two main variables of the study: social media sales and customer satisfaction. It is important to clarify that the present study does not conduct a technical or semiotic analysis of specific visual pieces. The approach adopted is perceptual and experiential, focused on how customers evaluate their interaction with the brand on social media as a digital visual environment. Consequently, the variables analysed capture the user's perception regarding communicative clarity, consistency of corporate identity, and purchase experience, understood as components of a visual experience applied to digital commerce.

The instrument underwent a rigorous validation process. First, expert judgement validation was conducted, involving three professionals with experience in quantitative research and digital marketing. These experts assessed the relevance, clarity, and coherence of each item. Subsequently, a pilot test was carried out with 15 customers who shared similar characteristics with the final sample. The data obtained enabled the calculation of Cronbach's Alpha coefficient, which yielded a value greater than 0.8, indicating high internal consistency. In addition, an exploratory factor analysis was performed to verify the appropriate grouping of items according to their respective dimensions, thereby supporting the construct validity of the instrument.

Regarding the ethical principles of the research, the confidentiality and anonymity of the participants were guaranteed. Prior to completing the questionnaire, participants were clearly informed about the study's objectives, its voluntary nature, and their right to withdraw at any time without consequences. All participants provided their express informed consent at the beginning of the digital form. The research was conducted in accordance with the ethical guidelines established by the academic institution, ensuring respect, integrity, and privacy of the respondents at all times.

5. Results

5.1. Reliability Analysis

To assess the internal consistency of the questionnaire, Cronbach's Alpha coefficient was employed. The variable Customer Satisfaction, comprising 11 items, obtained a coefficient of 0.988, while the variable Social Media as a Sales Channel, consisting of 8 items, achieved a value of 0.984. These values reflect excellent reliability, as they substantially exceed the 0.90 threshold recommended by George and Mallery (2003).

5.2. Descriptive Data Analysis

The descriptive results presented below provide an understanding of the participants' profile and their perceptions regarding the use of social media as a sales channel in relation to customer satisfaction. This initial analysis offers an overview of customers' behaviour and opinions, which will serve as a foundation for interpreting the relationships between the studied variables in the subsequent sections.

Table 1 indicates that the sample consisted of 109 customers, of whom 51.9% were legal entities (companies) and 48.1% were natural persons. This balanced representation of both types of customers enables a comparative analysis of perceptions between individual consumers and business organisations.

Table 1. Demographic data of participants

		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Natural person	52	48,1	48,1	48,1
	Legal entity (Company)	57	51,9	51,9	100,0
	Total	109	100,0	100,0	100,0

Source: Own elaboration, 2025.

In Table 2, the results show a dispersed distribution regarding customer satisfaction. 24.8% of respondents reported a very low level of satisfaction, followed by 23.9% who fell into a medium level. Only 18.3% expressed very high satisfaction. This dispersion suggests that the customer experience with the company is not homogeneous and that there are critical areas requiring attention.

Table 2. Customer satisfaction levels

		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Very low	27	24,8	24,8	24,8
	Low	18	16,5	16,5	41,3
	Medium	26	23,9	23,9	65,1
	High	18	16,5	16,5	81,7
	Very high	20	18,3	18,3	100,0
	Total	109	100,0	100,0	100,0

Source: Own elaboration, 2025.

In Table 3, 33.0% of respondents perceive that the company has a high presence on social media, while 23.9% rate it as medium. Nevertheless, 24.8% consider this presence to be very low. These results indicate that, although there is a visible effort on social media, there are still opportunities to strengthen the digital strategy in order to expand reach.

Table 3. Levels of presence on social media

		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Very low	27	24,8	24,8	24,8
	Low	20	18,3	18,3	43,1
	Medium	26	23,9	23,9	67,0
	High	36	33,0	33,0	100,0
	Total	109	100,0	100,0	100,0

Source: Own elaboration, 2025.

In Table 4, the perception of service quality reveals a critical area: 31.2% of customers rate it as low, and 24.8% as very low. Only 27.5% consider it to be high. This highlights the need to improve customer service processes and the fulfilment of expectations, despite the company's active digital presence.

Table 4. Service quality levels

		Frequency	Percentage	Valid Percentage	Cuulative Percentage
Valid	Very low	27	24,8	24,8	24,8
	Low	34	31,2	31,2	56,0
	Medium	18	16,5	16,5	72,5
	High	30	27,5	27,5	100,0
	Total	109	100,0	100,0	100,0

Source: Own elaboration, 2025.

In Table 5, regarding the purchase experience, 34.9% of participants reported a high level of satisfaction, which is a positive indicator. However, 23.9% indicated a low experience and 24.8% a very low one. This suggests that, although progress has been made, gaps in service consistency persist.

Table 5. Levels of shopping experience

		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Very low	27	24,8	24,8	24,8
	Low	26	23,9	23,9	48,6
	Medium	18	16,5	16,5	65,1
	High	38	34,9	34,9	100,0
	Total	109	100,0	100,0	100,0

Source: Own elaboration, 2025.

In Table 6, loyalty also obtained 34.9% at the high level, which indicates a favourable perception regarding the continuity of the commercial relationship. However, 24.8% reported very low levels, highlighting the need to reinforce actions that promote loyalty in a more sustained and uniform manner.

Table 6. Customer loyalty levels

		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Very low	27	24,8	24,8	24,8
	Low	18	16,5	16,5	41,3
	Medium	26	23,9	23,9	65,1
	High	38	34,9	34,9	100,0
	Total	109	100,0	100,0	100,0

Source: Own elaboration, 2025.

In Table 7, it can be observed that 33.0% of respondents perceive the corporate identity at a high level, while 25.7% consider it low and 24.8% very low. In the context of the present study, corporate identity is understood as the perception that customers have of the visual and communicative coherence of the company on its social media platforms, including elements such as consistency of brand image, visual style of content, clarity of the transmitted message, and the manner in which the company presents itself digitally to its audiences. These results indicate that, although a relevant segment of customers recognises a solid corporate identity in the digital environment, a considerable group still perceives weaknesses in the visual and communicative representation of the brand. This suggests the need to strengthen the management of corporate identity as a central component of the customer experience in social commerce environments.

Table 7. Levels of corporate identity

		Frequency	Percentage	Percentage Valid Percentage	Cumulative Percentage
Valid	Very low	27	24,8	24,8	24,8
	Low	28	25,7	25,7	50,5
	Medium	18	16,5	16,5	67,0
	High	36	33,0	33,0	100,0
	Total	109	100,0	100,0	100,0

Source: Own elaboration, 2025.

In Table 8, it can be observed that digital communication was positively rated by 33.0% of respondents, who considered its level to be high; nevertheless, 24.8% rated it as very low, which evidences a heterogeneous perception of the digital channel. In the context of this study, digital communication is understood as the set of interactions that the company establishes with its customers through its social media platforms, including the clarity and timeliness of responses, message coherence, quality of the information provided, and the visual way contents are presented. These results suggest that, although a portion of customers perceives effective digital communication, there remains a significant margin for strengthening the consistency, frequency, and visual quality of online interactions in order to enhance the customer experience in social commerce environments.

Table 8. Levels of digital communication

		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Very low	27	24,8	24,8	24,8
	Low	20	18,3	18,3	43,1
	Medium	26	23,9	23,9	67,0
	High	36	33,0	33,0	100,0
	Total	109	100,0	100,0	100,0

Source: Own elaboration, 2025.

In Table 9, it can be observed that payment processes were rated as high by 33.0% of customers; however, 25.7% indicated that their level is low and 24.8% considered them very low, which evidences differentiated perceptions regarding this dimension of the digital channel. Within the framework of this study, payment processes refer to the customer's perception of the ease, clarity, and security of the mechanisms used to complete transactions through social media, including understanding of the payment steps, availability of payment methods, confirmation of the operation, and the trust generated during the process. These results suggest the need to review and optimise the digital payment experience in order to strengthen service efficiency and customer trust in the social commerce environment.

Table 9. Levels of payment processes

		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Very low	27	24,8	24,8	24,8
	Low	28	25,7	25,7	50,5
	Medium	18	16,5	16,5	67,0
	High	36	33,0	33,0	100,0
	Total	109	100,0	100,0	100,0

Source: Own elaboration, 2025.

In Table 10, purchase ease obtained a 33.0% high rating, which reflects a positive perception regarding accessibility. Nevertheless, 25.7% considered it low and 24.8% very low, which evidences that not all customers find the process equally smooth or convenient.

Table 10. Levels of ease of purchase

		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Very low	27	24,8	24,8	24,8
	Low	28	25,7	25,7	50,5
	Medium	18	16,5	16,5	67,0
	High	36	33,0	33,0	100,0
	Total	109	100,0	100,0	100,0

Source: Own elaboration, 2025.

In Table 11, in terms of security in transactions, 33.0% of respondents rated this aspect as high. However, 24.8% considered it very low and 18.3% as low, indicating that a significant proportion of customers still perceive risks. Consequently, it is necessary to reinforce mechanisms of trust and data protection.

Table 11. Security levels

		Frequency	Percentage	Percentage Valid	Cumulative Percentage
Valid	Very low	27	24,8	24,8	24,8
	Low	20	18,3	18,3	43,1
	Medium	26	23,9	23,9	67,0
	High	36	33,0	33,0	100,0
	Total	109	100,0	100,0	100,0

Source: Own elaboration, 2025.

5.3. Correlational Analysis

In Table 12, it can be observed that normality tests were conducted using the Kolmogorov-Smirnov (K-S) statistic because the population exceeded 50 individuals. The results indicate that the variables follow a non-normal distribution, as the obtained probability is less than 0.05; therefore, the corresponding statistical analyses will be non-parametric. Accordingly, Spearman's rank correlation test will be used to examine the correlations.

Table 12. Normality test of the variables and dimensions of the study

Dimensions and variables	Kolmogórov-Smirnov			Shapiro-Wilk		
	Statistics	gl	Sig.	Statistics	gl	Sig.
Customer satisfaction	0,235	109	0,000	0,806	109	0,000
Social media	0,234	109	0,000	0,797	109	0,000
Service quality	0,233	109	0,000	0,841	109	0,000
Purchase experience	0,247	109	0,000	0,794	109	0,000
Customer loyalty	0,245	109	0,000	0,803	109	0,000
Corporate identity	0,239	109	0,000	0,803	109	0,000

Source: Own elaboration, 2025.

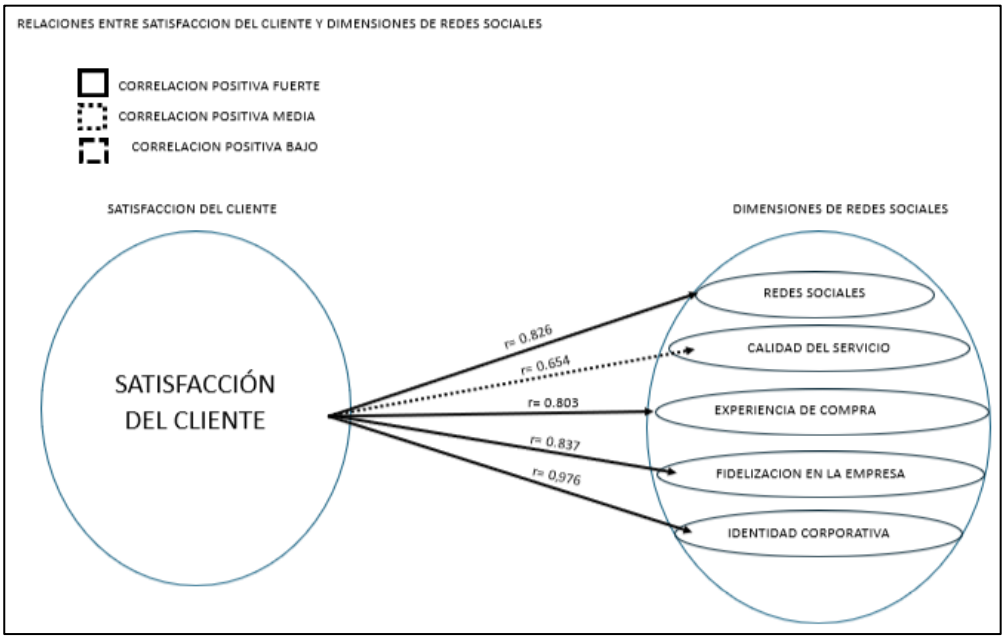
The results of the Spearman test, represented in Figure 1, show a very high positive correlation between the use of social media and overall customer satisfaction (r = 0.826). This finding demonstrates that higher levels of commercial interaction through digital platforms are associated with greater perceived satisfaction among users. This evidence confirms that social media, when used strategically, not only fulfil a communicative role but also enhance the customer experience from both functional and emotional perspectives.

When disaggregating the correlations by specific dimensions, a strong relationship is observed between the use of social media and customer loyalty (r = 0.837), indicating that these platforms are effective in strengthening long-term bonds, thereby increasing the likelihood of repurchase and recommendation. Similarly, the purchase experience shows a high correlation (r = 0.803), reflecting that social media optimise the acquisition process through more agile, accessible, and personalised attention.

Regarding corporate identity, the highest correlation in the entire analysis was identified (r = 0.976), which reinforces the notion that consistent and coherent activity on social media contributes decisively to consolidating brand image, positioning, and perceived trust among consumers. This result suggests that social media management not only impacts operational performance but also the symbolic and reputational value of the company.

On the other hand, the correlation with service quality, although significant, was of lower intensity (r = 0.654). This suggests that while social media contribute positively to this aspect, their effect may be limited by additional factors. These include personalised attention, immediate response capacity, and the effective fulfilment of expectations that extend beyond the digital environment. This finding indicates that the perception of quality does not depend solely on visual or digital channels but requires comprehensive strategies that also address the customer's direct experience with the product or service.

Figure 1. Spearman's test of the social media variable with customer satisfaction dimensions.



Source: Own elaboration, 2025

6. Discussion

The results of this study confirm a high positive relationship between the use of social media as a sales channel and customer satisfaction. From an interpretive perspective, these findings suggest that the customer experience in social commerce environments is shaped by digital interactions that integrate both functional and perceptual components. In this regard, social media—beyond their transactional function—can be understood as digital environments where the presentation of content, communicative coherence, and corporate identity influence the way customers evaluate the service and construct their experience. Thus, without conducting a technical analysis of visual elements, the results allow us to understand customer satisfaction as the outcome of an experience mediated by digital interaction and the brand's visual communication.

Comparison with previous studies, such as that of Huamaní (2022), reaffirms that the visual aesthetics employed by brands on social platforms directly influence the construction of emotional bonds with the consumer. This finding is consistent with the propositions of digital visual culture, which argue that the visual languages present in digital environments generate shared meanings and codes that shape how users interpret the purchase experience (Mirzoeff, 2015; Manovich, 2020).

In particular, the corporate identity dimension exhibited the highest correlation (Spearman's Rho = 0.976), which demonstrates that a coherent and professional visual presence on social media not only reinforces brand recognition but also functions as a symbolic device that projects credibility, closeness, and institutional values. This finding aligns with observations made by Arazzi et al. (2023), who highlighted the impact of a visually articulated digital presence on brand perception. Similarly, according to Li et al. (2023), interaction on e-commerce platforms significantly influences customer satisfaction, although the strength of this relationship may vary depending on the level of digital development and the company's communication strategy.

On the other hand, service quality showed a moderate relationship (Spearman's Rho = 0.654), similar to findings reported by Del Carpio (2019) and Moon et al. (2021). This difference relative to other dimensions may be attributed to the fact that, although the service is perceived as adequate, in highly specialised sectors such as the biomedical field, perceptions of quality are influenced by additional variables—including after-sales support, logistical fulfilment, and personalised attention—elements that do not depend exclusively on the digital channel.

With respect to the purchase experience, a high correlation was identified (Spearman's Rho = 0.803),

which evidences that social media not only provide access to products but also optimise the acquisition process by offering immediacy, personalised interaction, and clear information. This finding surpasses results obtained in previous research conducted in less specialised contexts. For instance, Saffana et al. (2023) highlight that active participation in live broadcasts on social media platforms such as Instagram contributes to faster and more secure purchasing decisions, while Wang et al. (2018) demonstrate that customer satisfaction improves when there is efficient spatial distribution and effective communication based on digital reviews. In highly specialised environments such as that of medical equipment, these elements take on even greater relevance due to the need for reliable technical information to support decision-making.

Regarding customer loyalty, a high correlation was found (Spearman's Rho = 0.837), consistent with the conclusions of Melović et al. (2021), who assert that the digital experience directly influences customer retention. Nevertheless, unlike corporate identity, customer loyalty may be conditioned by external factors such as pricing policies, competitor promotions, or the quality of after-sales service, which could explain why its impact, although significant, was not the highest.

From a methodological perspective, this study presents certain limitations that should be considered when interpreting its results. First, the analysis was based on a single company, which restricts the capacity for generalisation to other sectors or regions; however, this specificity does not invalidate its value, as it provides a representative view of a business context undergoing digital adaptation. Second, the sample consisted exclusively of customers with active use of social media, which may introduce a bias related to the participants' level of digital literacy. Furthermore, the cross-sectional design prevents the evaluation of variations over time, making it impossible to establish causal relationships or to observe the evolution of perceptions throughout the customer experience cycle.

Based on these limitations, several avenues for future research are proposed. It would be pertinent to replicate this study in other industries, particularly those undergoing digital transformation, in order to compare results and enrich the understanding of the factors influencing customer satisfaction. The use of longitudinal designs is also recommended to observe changes in consumer perception and behaviour over time. Finally, the inclusion of mediating or moderating variables—such as content personalisation, technological familiarity, or perceived value—could provide a more comprehensive view of the strategic impact of social media on the company-customer relationship.

7. Conclusion

The purpose of this research was to identify the relationship between the commercial use of social media and customer satisfaction in a Peruvian company within the biomedical sector. The results obtained through Spearman's correlation coefficient demonstrate a positive and statistically significant relationship between the two variables ($\rho = 0.826$), thereby confirming the general hypothesis proposed in the study. More specifically, the findings support the notion that the dimensions associated with the performance of the digital channel are linked to various components of customer satisfaction—such as the purchase experience, corporate identity, loyalty, and perceived service quality—thus partially and differentially confirming the specific hypotheses formulated. Taken together, the results lead to the conclusion that social media constitute a relevant channel not only for commercial transactions but also for the construction of digital experiences that influence the customer's overall evaluation, providing empirical evidence for understanding social commerce in specialised business contexts.

Furthermore, significant associations were identified between specific dimensions of social media use and different facets of customer satisfaction. Among these, corporate identity exhibited the highest correlation (Rho = 0.976), followed by customer loyalty (Rho = 0.837) and purchase experience (Rho = 0.803). This highlights the strategic importance of a coherent and well-managed digital presence. By contrast, service quality displayed a moderate relationship (Rho = 0.654), suggesting that improvements in this area require not only digital efforts but also complementary actions in operational management and personalised customer care.

From an applied perspective, the results offer concrete contributions for companies in the

healthcare sector seeking to strengthen their positioning in digital environments, particularly in markets where the use of social media as a commercial channel is on the rise. The empirical findings can guide decision-making regarding visual marketing strategies, relational management, and the symbolic construction of the brand. At the theoretical level, this study contributes to consolidating the body of knowledge on the relationship between e-commerce on social media and customer satisfaction, particularly in highly specialised sectors such as the biomedical field, which remain underexplored in the academic literature.

In terms of research direction, the study is situated within the field of visual arts applied to digital environments, by examining how interactions on social media configure a perceptual and symbolic experience that influences customer satisfaction. The conclusions provide empirical evidence for understanding social commerce not merely as a transactional process, but as a communicative and visual practice in which brand identity and user experience are constructed through digitally mediated visual environments.

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