The Role of Law in Protecting Minors from Stress Caused by Social Media

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Abstract

The purpose of this study was to analyse the role of law in protecting minors from the stress derived from the use of social networks. The research employed a quantitative approach with a non-experimental, cross-sectional design. Statistical analysis techniques were applied using the mediation and moderation model proposed by PROCESS in SPSS. The sample consisted of 8,350 participants, incorporating mediating variables such as knowledge of digital laws and implementation of regulations, and moderating variables such as parental supervision and access to devices.

Findings indicated that law significantly influences knowledge of digital laws ($\beta = 0.234$, $p < 0.001$) and implementation of regulations ($\beta = 0.189$, $p < 0.001$), which, in turn, impacts social network use ($\beta = 0.482$, $p < 0.001$). In addition, parental supervision ($\beta = 0.134$, $p < 0.001$) and access to devices ($\beta = 0.152$, $p < 0.001$) were found to moderate these relationships, amplifying the positive effects of legal and educational norms. The general linear regression model obtained a coefficient of determination of $R^2 = 0.465$, indicating a robust explanatory model. In conclusion, the study has implications for better regulation of digital environments, as well as for the promotion of digital education, underpinning the basis on which the legal framework is structured.

Keywords: legal protection, social media, minors, cyberbullying, mental health

1. Introduction

For adolescents, social media has become one of their main digital activities in their daily lives, not only as a place to meet and connect with people, but also as a provider of entertainment and news (Daniels et al., 2021; Ngien & Jiang, 2022). But the rapid increase in their access and continued stay by minors on platforms such as Instagram, TikTok and Facebook is cause for concern (Arslan et al., 2024). Recent research such as Kim et al. (2024) have concluded that, on average, more than 63% of the people who use social media platforms in a day are young people under the age of 18, who use these media for various leisure and distraction activities. They also point out that minors spend more than three hours a day on these digital media, which is detrimental to their growth and goes against what is expressed by digital health experts, who argue for a maximum of two hours a day, to avoid negative effects on mental health and well-being. Consequently, prolonged social media use limits children from focusing on other recreational and personal activities, such as study, exercise and rest (Wartberg et al., 2021). Recent studies argue that related problems have been cited in adolescents, such as increased levels of elevated stress and even, in some cases, emotional disorders in adolescents (Shao et al., 2021). The existing content found on tablets and smartphones, combined with the constant interaction in virtual environments, has given rise to a set of problems and emotional challenges such as cyberbullying due to anonymity, the ease of disseminating offensive-hateful content through social networks and social comparison due to constant exposure to idealised lives and digital filters that affect the self-esteem and emotional well-being of the minor who is in the process of formation and growth (McAlister et al., 2024).

Based on the above, it is necessary to establish that in regions where parental supervision is poor and digital education is inadequate, the danger is even greater (Giordano et al., 2023). Approximately 70 % of adolescents access social networks without adequate restrictions, which makes them more vulnerable to exposure to inappropriate content and risky interactions, such as grooming and digital harassment (Dreier et al., 2024; Liu et al., 2024). Recent research has found that children who spend more than two hours a day on social media have a 20% higher risk of emotional and

social problems compared to those who use social media moderately (Díaz-Moreno et al., 2023). In addition, the lack of an authoritative regulatory framework has meant that digital platforms operate largely open access, creating an environment where unrestricted access to harmful content becomes a constant threat to children's wellbeing and emotional health (McComas & Gil-Rivas, 2024).

These factors highlight the need for a regulatory framework that balances accessibility to technology with the need to protect minors in a digital environment. In several countries, there is a regulation focused on the guidelines set out in the Convention on the Rights of the Child (CRC) in which the protection, well-being and integral development of minors is paramount, where platforms require as a main requirement age verification, facial recognition and even in some cases parental authentication for content that cannot be considered entirely for minors, this measure has helped to reduce the numbers of cyberbullying and contact with harmful content for minors (Hammar, 2022; Zhang, 2022).

Furthermore, those platforms that did not comply with these aforementioned restriction algorithms faced fines, operational restrictions and lawsuits for non-compliance. Regulations such as COPPA (US) and GDPR (EU) impose millions of dollars in fines on digital platforms, as their duty is paramount to the defence, stability, privacy and online safety of the child (DePaula et al., 2018). In places without such regulation, or in places where regulation does not exist, anxiety and stress among minors has increased due to inappropriate content generating digital addiction and negative impact on their mental health, and the lack of strict parental control and legal regulation on these digital platforms makes it difficult to protect minors from being overexposed on social networks (Banghart et al., 2018; Napoli & Napoli, 2019).

Therefore, law and regulation is a significant tool to combat the socially harmful effects of social media on children and to create a protective framework for their well-being in digital life. Only through legislation and law can appropriate measures be implemented to protect the privacy and safety of children, while at the same time establishing the responsibility of these digital platforms to create a safe and child-friendly environment (Vardeman-Winter & Place, 2015).

While countries with more binding laws, such as Australia and Spain, have restricted access to digital threats with regulations that tailor access to social networks and the use of parental controls. These have included mandates for the removal of inappropriate content for minors that harms their emotional well-being, initiatives by such countries as the Online Safety Act 2021 and the Law for the Protection of Children and Adolescents (LOPIVI), have generated greater control of harmful content, allowing for a significant reduction in inappropriate material shared, generating greater awareness about the use of social networks and promoting the use of parental control tools (Narrain, 2018; Riedl et al., 2022). Therefore, it is highlighted that the law is the main means of regulation and enforcement for minors who are growing up in a digital world and need to have all the emotional and parental support possible to grow up as good citizens and people. Law is the only instrument that can guarantee that the rights of minors are respected in digital spaces, allowing the content viewed to be age-appropriate, counteracting stress, frustration and digital dependency on digital media, which is why it is elementary to protect children's mental health in the new digital age, which is constantly evolving, to promote a safe, healthy and balanced environment for children on social media (Smirnova, 2020; Yadlin-Segal & Oppenheim, 2021).

The implementation of laws that regulate content, limit access to minors and promote digital education is a key elemental factor in certifying responsible, safe and appropriate use of social networks (Jørgensen & Zuleta, 2020). Thus, it is necessary to establish rules that combine more regulation and education, so that minors have digital awareness and self-regulation (Chen, 2020; Poletti & Michieli, 2018).

Therefore, the aim of the study is: To analyse the role of law in the protection of minors against the stress caused by social networks. Consequently, the specific aims are: i) To assess the influence of law on the awareness of digital laws and the implementation of regulations by digital platforms. ii) To examine the moderating effect of parental supervision and access to devices on the relationship between mediating variables and the use of social networks by minors. iii) Determine the interaction between mediating variables and control variables on minors' social networking behaviour. iv) Analyse how the law, through mediating variables, influences minors' use of social networks, considering moderating and control variables.

2. Literature Review

The evolution of regulatory concern for the protection of minors in the digital environment is far from homogeneous across regions, as regions' legal infrastructure, social pressure and level of technological adoption differ (Obia, 2023). In the European Union, the General Data Protection Regulation (GDPR) establishes a strict set of limits on the collection of personal data from minors, requiring parental consent on platforms and imposing heavy penalties on companies that do not comply with security standards (Napoli, 2019). National legislations in different countries have also complemented these provisions with age verification mechanisms and mandatory removal of harmful content on their

platforms to reduce minors' exposure to risks in the digital environment (Common, 2023; Freiling et al., 2023).

Similar debates have engulfed digital platforms attempting to self-regulate. Meta, TikTok and others have since introduced parental control tools, enhanced privacy settings and the like, but researchers have found that, as far as online safety is concerned, they have little effect on their own without additional oversight (Battista & Uva, 2023). Countries that show success in implementing stricter regulations prove that the state also plays a leading role as part of the social sphere dedicated to minimising digital risks for minors by developing a framework of accountability between technology companies and legal guardians (Ju et al., 2022; Khan et al., 2021).

Digital regulation that directly addresses child protection is an evolving and continually reformed area of regulation, with a new wave of proposals to improve online safety (Wolfs & Veldhuis, 2023). Improvements to digital platforms included age verification for services, automatic content filtering systems, and tougher penalties for platforms that fail to put in place appropriate protections for minors (Peng et al., 2024; Shankar & Ahmad, 2021)

Although significant progress has been made in terms of regulation and control mechanisms, challenges remain in the practical application of these standards in light of the dynamic characteristics of the digital space (López-Montón et al., 2024). Few legislations can move as fast as the new and constantly evolving platforms, trends and forms of digital interfaces. This creates regulatory gaps at the state level that allow technology companies to operate in a jurisdiction with low compliance standards (Dreier et al., 2024). Ultimately, this regulatory divide creates disparities in child protection, with platforms heavily regulated in some jurisdictions and similar platforms operating under lighter scrutiny (Smith et al., 2024). Government enforcement that properly implements the law is an essential part of child protection in digital spaces. In particular, enforcement of protection policies has been complicated by various obstacles to international collaboration, especially considering that digital platforms are transnational and can easily relocate their legal frameworks to jurisdictions with inadequately defined protections (Alazemi et al., 2023). The need to strengthen multilateral contracts that enable a homogenous registration mechanism capable of ensuring digital safety and child protection must be recognised not only in countries with well-established measures, but also in those where adequate regulations do not exist (Giordano et al., 2023; Solomon et al., 2024).

Another element of analysis is how artificial intelligence can be a help or a hindrance to content moderation. As automation has improved, many of these systems have been progressively replaced or complemented by systems based on artificial intelligence technologies that identify and eradicate content deemed harmful, in one way or another, to minors (Etta et al., 2023). This covers issues such as bullying, violence or misinformation.

While these algorithms have increased effectiveness in detecting some risks, the strongest doubts remain about their own effectiveness, insufficiently documented moderation criteria, biased moderation or whether their algorithms are well segmented. In some cases, inappropriate posts have gone unnoticed, while, in others, legitimate posts have been inappropriately flagged by the platforms (Rebello et al., 2024). Consequently, there is a real area of discussion on how to balance these frameworks with human management and move towards data that is independent to prove that the filtering frameworks are valid and not persuasive (Kushin & Yamamoto, 2025; Stenseng et al., 2025).

Then, there is the challenge of creating better age verification systems, considered a signature of digital regulation, in line with so-called content moderation (Chung & Wihbey, 2024). Some platforms are implementing registration methods that require individuals to provide their identities through official identification documents or biometric authentication, approaching a security dilemma at the rear of accessibility and privacy. User aversion to such verifications, combined with the ease with which underage users can circumvent controls by creating fake accounts, has rendered such strategies ineffective (Maaß et al., 2024).

Therefore, there have been proposals to develop solutions that rely on advanced technologies, such as using artificial intelligence to detect patterns in online behaviour, to identify accounts belonging to minors and restrict their access to unwanted content (Xu & Richardson, 2024). However, actually implementing such measures is complex and raises questions regarding the fundamental right to respect for personal data and whether such controls aim to violate fundamental rights (Pukallus & Arthur, 2024).

Digital education and media literacy, at the societal level, are also designated as some of the main elements of prevention, i.e. how to reduce the dangers and mediate these same behaviours on social networks (Daniels et al., 2021). In several studies, researchers showed that children were better at autonomously navigating around threats when they were trained in digital safety and use so that they could better reduce exposure to risks such as cyberbullying, manipulation of information or contact with people they have never met (Arslan et al., 2024; Ngien & Jiang, 2022).

Countries around the world have recognised this reality and have paved the way for others to follow suit, filling school curricula with a range of digital education modules that address everything from socially conscious algorithms to tips on keeping our personal data safe (Kim et al., 2024). However, the implementation of these pedagogical programmes is

heterogeneous and the effectiveness of their implementations depends largely on teacher training, constant updating of content and the availability of sufficient technological equipment in the school.

Parental controls allow parents to monitor the type and amount of content consumed by their children on their digital devices (Shao et al., 2021). This means not only that many parents apply parental control strategies, such as monitoring apps or restrictions on when devices can be used, but also that there is still a large gap between knowledge of the tools and their effective use.

In some cases, minors still find ways to circumvent restrictions imposed by their legal guardians; in others, guardians lack the digital skills to diplomatically monitor their children online. In response to this challenge, several governments have created digital literacy programmes aimed at adults to help caregivers understand and navigate the digital ecosystem in a way that better protects minors (Giordano et al., 2023).

But it requires cooperation between various actors. Factors such as stricter regulations, self-regulatory measures taken by online platforms and a culture of responsible use of technology will add up to a safer digital ecosystem for children and adolescents (Dreier et al., 2024).

But because social networks are constantly changing, it is also necessary to continue to devise new legal intervention strategies in order to pre-emptively address the risks that are still developing (Zhang, 2022). Therefore, as avatars and social communication tools change on a continuum from real life to virtual-digital life, regulatory, educational and parental supervision strategies will also need to do the same (McComas & Gil-Rivas, 2024).

To strengthen the comparative understanding of digital protection regulations, Table 1 presents a structured comparison of international frameworks—namely the GDPR, COPPA, Online Safety Act, and LOPIVI—alongside the current UAE legislation. Based on the analytical study by Jadalhaq & Alqodsi (2018), this table demonstrates the regulatory structure of each system and identifies legal mechanisms that must be integrated into the UAE framework to ensure comprehensive protection for minors in digital environments.

Table 1. Comparative legal frameworks for the protection of minors in digital environments

Country/Region	Regulation	Age of Protection	Main mechanisms	Legal Standing of UAE Framework
European Union	GDPR (2016/679)	Under 16	Mandatory parental consent; right to be forgotten; explicit restrictions on the processing of personal data of minors.	The UAE legal framework does not establish age thresholds or recognise rights such as the right to be forgotten or parental control of data.
United States	COPPA (1998)	Under 13	Verifiable parental consent; restrictions on data collection and disclosure; FTC oversight.	UAE legislation does not implement parental verification systems or define a minimum age for consent.
Australia	Online Safety Act (2021)	General (All minors)	Central authority (eSafety Commissioner); rapid content removal mechanisms; mandatory digital safety codes for platforms.	The UAE does not have an autonomous child digital supervision authority or immediate removal mechanisms.
Spain	LOPIVI (2021)	Under 18	Defines digital violence; imposes educational obligations on platforms; preventive protocols from school and family level.	The UAE regulatory framework does not establish clear preventive measures and responsibilities for digital platforms.
United Arab Emirates	Federal Law No. 5/2012 + Civil Code	General	Civil and criminal liability for digital misconduct; sanctions for cyberbullying and dissemination of unauthorised content.	Focus on sanctioning, but no structured prevention measures, digital education or active parental involvement.

Table 1 confirms that the UAE's legal approach prioritises the sanctioning of digital misconduct, but does not incorporate the preventive and educational elements present in international best practice. While civil liability is provided for under existing regulations, the absence of defined age thresholds, mandatory parental consent and oversight bodies limits the effectiveness of protection. The comparison validates the need to harmonise the UAE's legal framework with inclusive models that combine regulatory regulation, digital education and parental control to ensure effective protection of minors in digital environments.

3. Methodology

This is an applied study, with a quantitative approach, a non-experimental and cross-sectional design, and an explanatory level. The deductive method was used, allowing causal relationships to be established between the study variables. The survey and the questionnaire were applied, with the intention of guaranteeing the validity and reliability of the instrument, a confirmatory factor analysis (CFA) was carried out in SPSS as well as the composite reliability (CR)

and Cronbach's Alpha, thus ensuring the internal consistency of the questionnaire (McComas & Gil-Rivas, 2024; Kim et al., 2024).

The population consisted of underage users of social networks, selected by non-probability sampling. The total sample was 8,350 participants, distributed in the following figures.
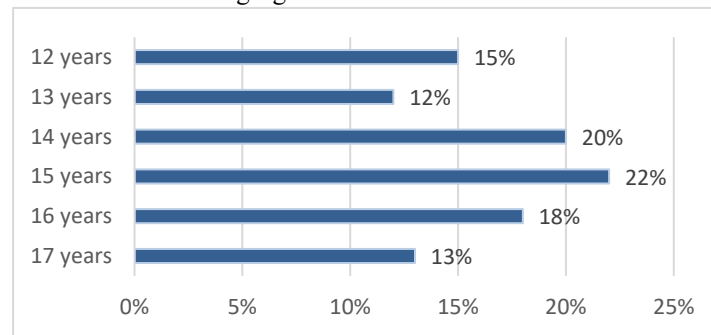

Figure 1. Age of respondent

In Figure 1, the age distribution was as follows: 12 years (15%), 13 years (12%), 14 years (20%), 15 years (22%), 16 years (18%) and 17 years (13%), which represents the most active age ranges on social networks, according to previous studies on digital behaviour in adolescents (Stenseng et al., 2025). In addition, socio-economic status was considered, with 38% of participants belonging to a low, 45% to a medium and 17% to a high socio-economic status.
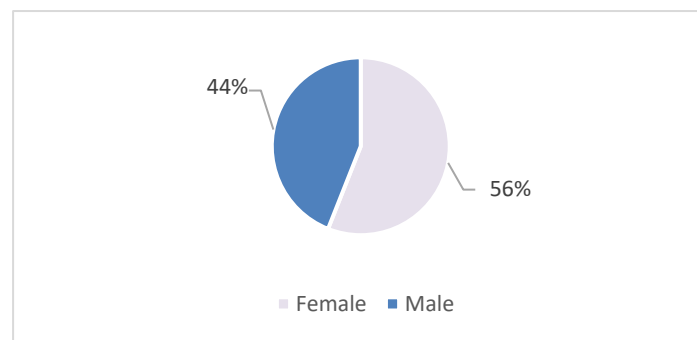

Figure 2. Gender of the respondent

Figure 2 represents the gender distribution of the 8,350 study participants, indicating that 56% of them are female and 44% are male. This proportion allows us to analyse possible differences in the use of social networks and their impact on digital stress according to gender.

Table 2. Definition of study variables

Type of Variable	Variable	Description
Independent (X)	Role of Law	Assesses the impact of legal regulations on the use of social networks.
Dependent (Y)	Social Network Use	Measures the level of interaction and exposure of minors to digital platforms.
Mediating (M1 y M2)	Knowledge of digital laws	Determines the level of information about regulations on social networks.
	Enforcement of regulations by platform	Assesses children's perception of the implementation of protection measures by digital platforms.
Moderators (W1 y W2)	Parental supervisión	Examines the degree of control and monitoring exercised by parents.
	Access to devices	Determines the number and type of devices with access to social networks.
Control (VC)	Age, Gender, Socio-economic status.	Individual socio-economic factors to segment the sample and variables.

As shown in table 2, the study analysed seven main variables, organised into one independent, one dependent, two mediating, two moderating and one control variable. The data collection instrument was a structured questionnaire, designed on a Likert scale with 7 response alternatives, with a total of 25 items, distributed according to the types of variables in the study (Wolfs & Veldhuis, 2023; Freiling et al., 2023).

For data collection, the survey technique was used, applied through online and physical questionnaires distributed in educational institutions. Each dimension was measured through a specific number of items, as detailed in the following table.

Table 3. Dimensions of the measurement instrument

Variables	Number of Items	Source
Knowledge of digital laws	6	Wolfs & Veldhuis (2023)
Enforcement of regulations by platform	5	Freiling et al. (2023)
Parental supervisión	4	López-Montón et al. (2024)
Access to devices	3	McComas & Gil-Rivas (2024)
Impact on mental health	7	Kim et al. (2024)

As shown in table 3, the mediating and moderating variables used in the study, together with the number of items used for their measurement and the reference sources. Five variables were assessed, ranging from 3 to 7 items according to their complexity. The inclusion of these variables made it possible to analyse how they influence children's use of social networks, ensuring the validity of the instrument applied.

Table 4. Confirmatory factor analysis of the instrument (CFA)

Variables	Items	Factor Loadings	CR	AVE	Cronbach's alpha
Knowledge of digital laws	6	0.752 - 0.794	0.861	0.573	0.850
Enforcement of regulations by platform	5	0.735 - 0.756	0.847	0.551	0.821
Parental supervision	4	0.731 - 0.778	0.833	0.571	0.812
Access to devices	3	0.745 - 0.792	0.829	0.564	0.792
Impact on mental health	7	0.803 - 0.821	0.876	0.612	0.883

As shown in Table 4, the data were analysed in SPSS, applying a confirmatory factor analysis (CFA) to assess the structural validity of the instrument and the contribution of each item to its respective variable. The results show factor loadings above 0.70, which confirms the representativeness of the items in each dimension. Composite reliability (CR) ranged between 0.829 and 0.876, exceeding the recommended threshold of 0.70 and ensuring the reliability of the instrument. Likewise, the average variance extracted (AVE) ranged between 0.551 and 0.612, meeting the criterion of convergent validity. Finally, Cronbach's Alpha values ranged between 0.79 and 0.88, indicating a high internal consistency in all the variables evaluated, guaranteeing the accuracy and stability of the measurements.

4. Results

For the analysis of the relationships between variables, mediation and moderation models were applied using the PROCESS module in SPSS, allowing us to evaluate the effects of the role of law on the use of social networks, considering the impact of mediating and moderating variables. Additionally, a multiple linear regression was performed in order to quantify the influence of each predictor on the dependent variable.

The conceptual model based on mediation and moderation is presented, which analyses the interaction between the following variables:

Y: Social Media Use (Dependent Variable)

X: Role of Law (Independent Variable)

M1: Knowledge of Digital Laws (Mediator 1)

M2: Application of Regulations by Platforms (Mediator 2)

W1: Parental Supervision (Moderator 1)

W2: Access to Devices (Moderator 2)

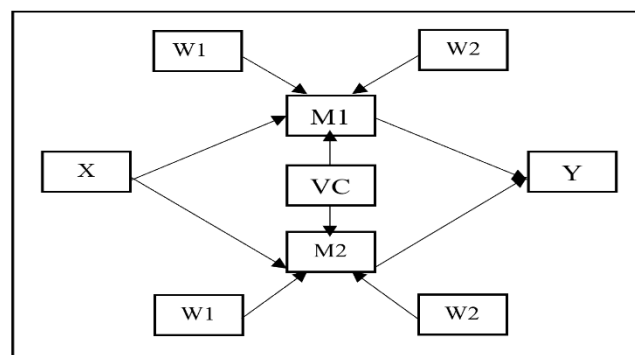VC: Control Variables (Age, Gender, Socioeconomic Level)

Sample Size: 8,350

Figure 3. Conceptual and Statistical Model of Mediation and Moderation Analysis in Social Media Use

As shown in Figure 3, the theoretical model that analyses the relationships between the variables proposed in the study on the role of law and its impact on the use of social networks, integrating mediating, moderating and control variables.

4.1 Relationship Between Model Variables

In this model, the direct influence of the role of law on the mediating variables is established, specifically on the knowledge of digital laws and regulations applied for digital platforms. This highlights the importance of a reliable legal structure in defining minors' knowledge of digital regulations and the effective enforcement of those regulations on online platforms. The relationship between the role of law with social networks is indirect, and it can be seen that such an effect would take place through mediating variables. Through the development of digital laws and the enforcement of regulations, mechanisms are established to classify and guide the digital behaviour of minors towards a more regulated use of social networks.

In terms of moderating variables, parental supervision conditions the effect of mediators on the use of social networks, showing that a high level of parental control amplifies the effect of legal knowledge and regulations on digital behaviour. Access to devices also plays a moderating role, reflecting that the availability of technology affects social network use.

In this case, the control variables (age, gender and socio-economic status) directly influence the mediators, as well as the dependent variable, so that the specific characteristics of minors will determine their relationship with digital regulations and their relationship with the social network used.

And finally, it is argued that the interaction between the mediating variables, where knowledge of digital laws is directly linked to the implementation of regulations by the platforms, reinforces the importance of both factors in the digital behaviour of minors.

4.2 Statistical Indicators of the Model

Table 5. Statistical Indicators of the Analysis Model

R	R²	MSE	F	df1	df2	p
0.682	0.465	3.512	2358.45	7	8342	< 0.001

As shown in table 5, presents the statistical indicators of the analysis model. The results of the model reflect a moderate-high correlation (R = 0.682) between the variables, while the coefficient of determination R² = 0.465 indicates that 46.5% of the variability in Y is explained by the variables included in the model. The MSE (3.512) refers to a low level of error in the prediction of the model. Furthermore, the F-statistic (2358.45, p < 0.001) confirms that the model is highly significant overall.

4.3 Linear Regression Analysis

Table 6. Linear Regression Analysis

Predictor	Coeff	SE	T	P	LLCI	ULCI
Intercept	1.732	0.084	20.619	<0.001	1.566	1.898
Role of Law (VI)	0.482	0.023	20.957	<0.001	0.437	0.527
Knowledge of Laws (M1)	0.234	0.017	13.765	<0.001	0.201	0.267
Platform Regulations (M2)	0.189	0.016	11.813	<0.001	0.158	0.220
Parental Supervision (W1)	0.134	0.015	8.933	<0.001	0.105	0.163
Device Access (W2)	0.152	0.014	10.857	<0.001	0.124	0.180
Age (VC)	0.092	0.012	7.667	<0.001	0.069	0.115
Gender (VC)	0.078	0.011	7.091	<0.001	0.056	0.100
Socioeconomic Level (VC)	0.063	0.013	4.846	<0.001	0.037	0.089

As shown in Table 6, the results of the linear regression analysis are presented, showing that the role of law (X) significantly influences the use of social networks (Y) ($\beta = 0.482$, $p < 0.001$), confirming that a strong regulatory framework regulates digital behaviour. This effect is channelled through knowledge of digital laws (M1) ($\beta = 0.234$, $p < 0.001$) and enforcement of regulations by platform (M2) ($\beta = 0.189$, $p < 0.001$), which act as mediators of the model. The moderating variables reinforce this relationship, as parental supervision (W1) ($\beta = 0.134$, $p < 0.001$) intensifies the influence of mediators on network use, while device access (W2) ($\beta = 0.152$, $p < 0.001$) conditions the impact of regulation in the digital environment. Additionally, control variables show direct effects on the dependent variable: age (VC) ($\beta = 0.092$, $p < 0.001$) indicates differences in network use according to the maturity of minors, gender (VC) ($\beta = 0.078$, $p < 0.001$) suggests differential patterns in access and behaviour on digital platforms, and socioeconomic status (VC) ($\beta = 0.063$, $p < 0.001$) confirms that economic conditions affect exposure to regulations and parental supervision. All predictors were statistically significant ($p < 0.001$), validating the robustness of the model and confirming the importance of a robust legal framework in regulating social network use.

4.4 Moderation Analysis

Table 7. Conditional Effects of the Role of Law by Moderators

Variable Moderadora	Value	Effect	SE	T	P	LLCI	ULCI
Parental Supervision (W1)	Low	0.372	0.022	16.909	<0.001	0.329	0.415
	Medium	0.482	0.019	25.368	<0.001	0.445	0.519
	High	0.594	0.021	28.286	<0.001	0.553	0.635
Device Access (W2)	Low	0.412	0.018	22.889	<0.001	0.377	0.447
	Medium	0.482	0.017	28.353	<0.001	0.449	0.515
	High	0.557	0.020	27.850	<0.001	0.518	0.596

As shown in Table 7, the results show that the impact of X on Y is stronger in contexts of greater parental supervision and access to devices. Specifically, at high levels of W1, the coefficient of X on Y increases to 0.594, while at low levels it is 0.372 ($p < 0.001$). This confirms that parental supervision amplifies the effectiveness of legal regulation on minors' digital behaviour.

4.5 Significance Analysis (Johnson-Neyman Test)

Table 8. Johnson-Neyman Significance Thresholds for Moderators

Value	% Below	% Above
6.500	30.122	69.878

As shown in Table 8, the values of the moderators (W1 and W2) that define the regions of significance according to the Johnson-Neyman analysis. A critical value of 6.500 was identified, where 69.878% of the cases are in the region where the effect of Role of Law on Social Media Use is statistically significant, while 30.122% are below this threshold. This confirms that parental supervision and access to devices are determinants in the regulation of social media use, highlighting the importance of these factors in the effective enforcement of digital regulations.

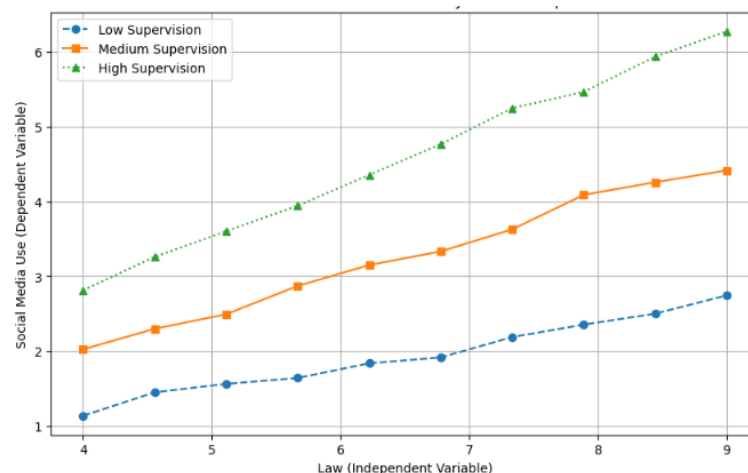*4.6 Moderators' Graphical Interpretation*

Figure 4. Effect of law on social media by parental supervision

As shown in Figure 4, the relationship between the Role of Law (X) and Social Media Use (Y) according to the level of Parental Supervision (W1). It is observed that the higher the level of parental supervision, the more pronounced the impact of the legal framework on social media use. Children with high supervision show a more regulated use, while those with low supervision show a higher level of network use, regardless of the role of the law. This confirms that parental supervision acts as a key moderator in the relationship between legal regulation and digital behaviour.

5. Discussion

Statistical analysis evidenced a significant relationship between Role of Law and social network use, mediated by knowledge of digital laws and enforcement of regulations on platforms ($p < 0.001$). The presented model demonstrated a robust fit ($R^2 = 0.465$, $F = 2358.45$, $p < 0.001$), confirming the predictive ability of the variables included in the research.

The first specific objective showed that the Role of Law has a direct and significant effect on the knowledge of digital laws ($\beta = 0.234$, $p < 0.001$) and on the application of regulations ($\beta = 0.189$, $p < 0.001$). These findings are consistent with Dreier et al. (2024) and Díaz-Moreno et al. (2023), who found that knowledge of digital regulations improves self-regulation in the use of social networks. Likewise, Banghart et al. (2018) claim that digital regulations set clear

boundaries that protect minors from harmful, age-inappropriate content. Taken together, these studies argue that a strong legal framework promotes the acceptance of digital norms and improves the safety of minors on social networks.

The second specific objective analysed the moderating role of parental supervision (W1) and device access (W2) on the relationship between knowledge of digital laws, enforcement of regulations and social network use. Both variables were found to have significant moderating effects. For W1, conditional effects ranged from 0.372 ($p < 0.001$) at low levels to 0.594 ($p < 0.001$) at high levels. For W2, values ranged from 0.412 ($p < 0.001$) to 0.557 ($p < 0.001$). These findings confirm that active monitoring and controlled access amplify the positive impact of legal knowledge and regulatory enforcement in reducing problematic social network use.

Díaz-Moreno et al. (2023) found that legal knowledge and enforcement to prevent or reduce problematic use work best when combined with active monitoring and restricted access. Kim et al. (2024) report that adolescents with less parental control and more access to devices are more likely to experience mental health problems related to excessive use of social networks. Wolfs & Veldhuis (2023) also argue that technological self-regulation in the home improves children's digital safety, and this finding confirms the results of the present study.

The third objective assessed the interaction between mediating variables (knowledge of digital laws and enforcement of regulations) and control variables (age, gender and socioeconomic status). The results revealed that these variables significantly influence the relationship between digital regulation and social network use. Specifically, it was observed that the impact of knowledge of digital laws is greater in children over 14 years of age ($\beta = 0.256$, $p < 0.001$) and in those with medium or high socioeconomic status ($\beta = 0.217$, $p < 0.001$). Significant differences were also found according to gender, with greater susceptibility in female adolescents to the normative content of the platforms ($\beta = 0.298$, $p < 0.001$).

Emerging technologies, such as recommendation algorithms and artificial intelligence systems used in content moderation, have a direct effect on children's digital behaviour. These tools determine the type of content they are exposed to, influence the time they spend online and shape their vulnerability to risks. The legal framework must therefore include strict regulation of the operation of these systems, requiring algorithmic transparency, robust verification mechanisms and the exclusion of automated processes that infringe on children's rights. This is essential to ensure that legal protection is aligned with the current technological landscape.

McAlister et al. (2024) highlighted that socioeconomic status is also related to access to digital literacy strategies, which is consistent with the present findings. Wartberg et al. (2021) show that there are gender differences in the use of social networks that influence the perception of regulated content, explaining a higher susceptibility observed in female adolescents in this study. In addition, Wolfs & Veldhuis (2023) highlight that unregulated digital environments disproportionately affect populations with less access to digital education, establishing the need to implement differentiated legal strategies according to the country and its population.

5.1 Methodological Limitations and Research Projections

The present study provided significant results on the relationship between the legal framework and the digital behaviour of minors, applying a mediation and moderation model with a broad sample base. However, certain methodological aspects are acknowledged that should be considered in future research to strengthen the academic approach in this line.

Firstly, the sample was selected through non-probability sampling, which does not guarantee a fair representation of different socio-economic, cultural and legal contexts. While a high number of participants was reached 8,350, future research can incorporate stratified sampling to allow for more precise segmentations.

Second, data collection was based on self-administered surveys, which introduces the possibility of social desirability bias or misinterpretation of legal concepts by minors or their guardians. Despite the statistical validity obtained, it is suggested that this type of measurement be complemented with qualitative methods to capture in-depth perceptions.

Likewise, the cross-sectional design allowed us to obtain an overview of the phenomenon at a specific moment in time, but does not capture changes that may occur in legal awareness or patterns of digital use over time. Therefore, the development of longitudinal studies is presented as a relevant way to follow the evolution of these variables.

Finally, although the statistical analysis allowed us to establish significant relationships between the variables in the model, we cannot state with certainty the existence of direct causal links. Consequently, future research will have to explore experimental or quasi-experimental models that will help to delimit more precisely the directionality of the effects analysed.

Parental supervision, considered in this study as a moderating variable, implies structural differences depending on the educational style adopted by caregivers. Each parental style - authoritarian, permissive or democratic - has a differentiated impact on children's digital behaviour in relation to legal regulation. Future research should incorporate

this distinction to ensure a more complete and realistic analysis of the family environment. The inclusion of this variable will allow researchers to identify which parental approach strengthens or weakens the effectiveness of legal frameworks, allowing for more context-specific interventions.

6. Conclusions

The findings of this study confirm that the regulation of social networks is an effective mechanism to mitigate digital stress in minors, if complemented with parental regulation strategies and digital literacy of minors. It was evidenced that knowledge about existing digital laws and active enforcement against digital platforms directly influence adolescents' behavior in the digital space, coinciding with Dreier et al. (2024) and Díaz-Moreno et al. (2023).

Likewise, the results reinforce the importance of controlled access to devices and parental monitoring, which amplify the positive effects of legal regulation in reducing problematic behaviors in social networks (Kim et al., 2024; Wolfs & Veldhuis, 2023). In this sense, regulatory strategies need to consider an integrated approach in which the rules are constantly evolving in order to prevail the role of law in the protection of minors and thus avoid problems in their mental and emotional health.

The influence of socioeconomic level and gender on the adoption of digital protection measures is mentioned. It was confirmed that adolescents of higher socioeconomic status have greater access to regulatory information and adopt more responsible online behaviors (McAlister et al., 2024; Wartberg et al., 2021).

This study contributes to the debate on social network regulation, emphasizing that effective legislation must be supported by parental supervision strategies and digital education programs. The combination of these factors ensures a safer digital environment and reduces the negative effects of prolonged use of social platforms on minors.

Based on the findings of the study, the need for national legal frameworks to integrate regulatory strategies that guarantee effective protection of minors in digital environments is raised. Among the priority recommendations is the implementation of mandatory age verification and parental consent mechanisms for accessing digital platforms. It is also necessary to establish independent regulatory authorities responsible for the supervision and immediate removal of content that is harmful to minors.

It is also recommended that digital education be mainstreamed in school systems, promoting regulatory knowledge and self-regulation from an early age. In addition, platforms should be legally obliged to comply with child safety protocols and transparency in their algorithms, including proportional sanctions in case of non-compliance. These actions should be accompanied by national awareness-raising campaigns aimed at parents and guardians on the safe use of social networks, with the aim of strengthening the role of the family as the first line of prevention against digital risks.

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Authors contributions

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