



INTERPERSONAL RELATIONSHIPS ON THE INTERNET: RISKY
ACTIONS AND THE PERCEPTION OF SERIOUSNESS IN ADOLESCENCEItxaro Etxague-Goia , Sandra Liliana Cuervo-Sánchez* 

University of the Basque Country - UPV/EHU, Department of Didactics and School Organization (Spain)

itxaro.etxague@ehu.eus*Corresponding author: sandraliliana.cuervo@ehu.eus

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Abstract

The use of the Internet and social media by adolescents to socialize with other people entails both potential risks and benefits. But what role is played by the perception of the seriousness of risky actions that adolescents take as part of their interpersonal relationships over the Internet? The aim of this study is to analyze the frequency of risky behaviors on social media and the perception of the seriousness by the adolescent population in their interpersonal relationships. This study considers a sample of 2529 adolescents in Spain, Italy and Greece between the ages of 10 and 17 years. The results indicate that a proportional relationship exists between the increase in age and the performance of risky actions. Girls tend to take fewer risky actions and their perception of the seriousness is greater compared to boys of the same age. The correlational analysis shows that risky actions increase as the perception of seriousness decreases, a trend that persists when controlling for the age variable. Along these lines, it is evident that the perception of seriousness is a variable that plays an important role in the regulation of risky behaviors in adolescents in the digital environment. This finding may be key for digital literacy processes, since it suggests that the educational approaches must focus on strengthening the perception of the seriousness associated with risky actions. This implies promoting the critical analysis of the risky nature of these actions and reflecting on their impact, both on a personal and a community level.

Keywords – Internet, Social media, Risk analysis, Risk perception, Adolescence.**To cite this article:**

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1. Introduction

Social media plays a fundamental role for the adolescent community, in so far as they are used to relate to the group of peers, among other activities. However, these relationships entail risks and opportunities, according to the behaviors in which adolescents engage on social media and the perception of the seriousness of said actions or behaviors.

Depending on the social, economic, cultural and developmental context of each person, adolescents of both genders may generate adaptive or maladaptive strategies in the management of social media that will

facilitate or complicate their individual development. Among the former are self-control, the prioritization of healthy activities and the exploration of varied off-line alternatives. The latter include the avoidance of parental control, at-risk behaviors, legitimizing the abusive use of the Internet and the acceptance of aggressive behaviors as natural (Arab & Díaz, 2015).

This situation leads us to pose questions about the frequency with which the adolescent population takes risks related to Internet and digital device use, taking into account the conducts and behaviors in which they engage on social media with other people. Along the same lines, questions are raised regarding the perception of the seriousness of these activities and behaviors. In this research, the results of an intercultural study are presented, with 2529 adolescents who are asked about their behaviors and perceptions of the seriousness of those behaviors on social media.

1.1. Paradoxes in Internet Use to Socialize in Adolescence

In the field of communications technology, the emergence of social media and Internet use to establish interpersonal relationships has generated different paradoxes in terms of its risks and benefits. These paradoxes are the subject of debates and broad-reaching research, particularly when the focus is on how the adolescent population uses social media, digital devices and the Internet.

With regard to the interpersonal relationships that adolescents establish through social media, of particular interest is the research by Livingstone and Stoilova (2021) on the classification of risks by conducts, behaviors, contact and contracts that can be generated in these virtual spaces. In the case of risks associated with contact, there is the risk of interaction with adults who might cause them harm, exemplified by the acceptance of friendship with a stranger or setting up a meeting with someone they have previously met on the Internet.

Within the cyber-communication processes facilitated by social media, trust is a fundamental aspect of accepting a friendship request, and in turn, it can be an explanation of the motivation that leads people to take this type of risk with persons they do not know. The trust that leads someone to accept an online friendship may be based on common interests, interactions that take place over a long period of time or social validation (Ellison, Steinfield & Lampe, 2007).

The building of friendship is a progressive process that ranges from superficial interactions to revealing personal aspects (Taylor & Altman, 1987). According to previous research, adolescents who play online video games tend to accept invitations from other players on the same platform, which can result in friendships that last over a long period of time (Carras, Van Rooij, Van de Mheen, Musci, Xue & Mendelson, 2017).

Likewise, social media play a crucial role for those adolescents who are seeking to become part of communities with similar interests, such as those who belong to LGBTBIQ+ groups, ethnic groups, political ideologies and different cultures. From this perspective, these digital platforms emerge as places of refuge, emotional support, validation and mutual support for young people, where they establish relationships of friendship with people they have previously met on the Internet (Brandt & Carmichael, 2020).

Participation in the social media can be considered beneficial, since they promote the creation and strengthening of communities based on shared experiences and interests, significantly contributing to the development and consolidation of personal identity. This phenomenon, as indicated by Brandt and Carmichael (2020), underscores the positive potential of social media in the learning and growth process of adolescents.

From another perspective, the way in which the adolescent population manages relationships with strangers on social media may be influenced by cultural and gender-related factors. Studies indicate that adolescent girls, for example, are more likely to establish emotional connections with friends, while boys tend to focus on shared interests, such as video games or sports (Svensson, Johnson & Olsson, 2022).

However, in research on the problematic use of social media by persons with low self-esteem, depression or high levels of anxiety, it has been seen that interaction with strangers can increase these problems, especially in adolescence, when they are faced with situations of cyber-bullying or grooming (Kumar & Goldstein, 2020). Similarly, as part of the trust paradox, we find the vulnerability to manipulation and deceit that the underage population may experience, as they may be less skillful in identifying the warning signs in online interactions, when they believe that they form part of a relationship of friendship. Along the same lines, the perception of the seriousness of this type of risky behavior can be diminished, since these are relationships established outside the off-line world.

On the other hand, accepting the friendship of strangers can lead to undesired posting of inappropriate content or contact with potentially harmful persons for children and adolescents, which is an added risk associated with accepting friendship with someone you have previously met on the Internet.

In addition, social media relationships often involve overexposure, where adolescents reveal feelings, thoughts and emotions that can place them at risk; these are thus examples of risky conducts. This conduct can be related to the revealing of information to strengthen the bonds of friendship. At the same time, it can be related to online risks associated with the loss of the sense of privacy and narcissism reflected in self-exhibition.

However, privacy is a concept that has been influenced by the structure of social media and how it works. According to Marwick and Boyd (2014), the social media offers tools for introducing oneself and getting to know other people, pushing underage minors to reevaluate their individual desires for privacy in an interconnected society, where sharing has become a requirement for participation. This dynamic decreases the perception of risk, since these conducts are normalized by social pressure and the popularity of practices such as providing immediate updates on daily activities, like exercising or visiting a store.

Along these lines, the paradox once again arises between the risks and the opportunities offered by social media. From the perspective of information exchange, revealing personal information is essential for establishing relationships of friendship; however, this also poses certain risks, as this information can be used by companies for commercial purposes and also facilitate fraud or cyber-bullying among individuals (Zani, Norman & Ghani, 2022).

With regard to behaviors on social media, adolescents may also relate to one another through behaviors associated with bullying and exclusion. Livingstone and Stoilova (2021) refer to these as behavioral risks. These behaviors are characterized by the potential harm they can cause among peers and in other groups. According to Marwick (2021), bullying on social media acts as a means through which to impose a social order, often used by individuals who, thanks to their privileges in society, can engage in harassment without any major consequences and suppress the voices of minority groups or potentially vulnerable people. Accordingly, those who question or challenge the power structures in force are usually more vulnerable to being bullied by those who align themselves with the social norms. Those who experience situations of bullying suffer psychological harm that results in self-censure or isolation, which is related to the social regulation from those who hold power, a common phenomenon in adolescence.

Previous studies (Zhu, Huang, Evans & Zhang, 2021) indicate that the figures for cyber-bullying on an international level vary from 14% to 52%. In the case of Spain, a higher prevalence of victimization of 57.5% (Marco & Tormo-Irun, 2018) has been reported, with variations according to the socioeconomic and geographic context, as well as by age and gender. With regard to differences by gender, researchers have shown that women have a greater probability of becoming victims, especially through indirect behaviors like social exclusion or the spreading of rumors, while boys tend to be involved more often as aggressors (Kumar & Goldstein, 2020; Wright & Wach, 2020).

According to Marwick (2021), bullying on the Internet is more common for women and non-binary people. This study agrees with a study conducted by Pew Research Center (2018), who found that 15% of adolescent girls reported having been victims of cyber-bullying, as compared to 6% of boys. Furthermore,

age plays an important role, as younger adolescents, between 12 and 14 years of age, are particularly vulnerable, due to their greater exposure time on the social media, which increases the possibility of being victims or perpetrators of bullying (Gómez-Tabares & Correa-Duque, 2022). This type of bullying has different characteristics from traditional bullying, such as the anonymity of the aggressor and the quick dissemination of hostile content, which can aggravate the psychological impact on the victims (Slonje & Smith, 2008).

In this same realm, we see the figure of the silent witnesses who, while not participating in the aggression directly, assume a position of apparent neutrality. However, their inaction acts as implicit support for the bully and negatively reinforces the experience of the victim. In this sense, Garandau, Turunen, Saarento-Zaprudin and Salmivalli (2023) indicate that increasing the defensive behavior of the observers or witnesses is a challenge. The fear of becoming the next victim prevents many potential defenders from taking action; furthermore, the presence of other people reduces the chances of anyone providing assistance, since it is assumed that someone else will take the responsibility of intervening. Lambe, Della-Cioppa, Hong and Craig (2019) indicate that most classmates who witness situations of bullying fail to intervene, and only 17%-19% of the witnesses assume the role of a defender when the harassment occurs in person.

Recent research concludes that cyber-bullying, as well as passive attitudes towards aggression, have serious consequences on the mental health of minors, increasing the risk for anxiety, depression and suicidal thoughts (Ortega, Elípe, Moran-Merchán, Calmaestra & Vega, 2009), as well as generating stressful situations, isolation and helplessness (López-Sáez, Pérez-Torres, Pastor, Lobato-Rincón, Thomas-Currás & Angulo-Brunet, 2024). Some studies have found that familiarity with risky actions reduces the perception of risk that the adolescent community has of them (Livingstone & Helsper, 2010), and that tolerance of violence is related to a cultural acceptance of stereotypical actions, which lessens the perception of the seriousness of the aggressive actions (for example, those performed by men) (Wang, Gao & Chen, 2023). However, studies on the perception of seriousness by the adolescent population regarding this type of bullying behavior are still scarce (Etxague-Goia, 2023).

In this sense, this research has two main objectives: firstly, to analyze the frequency of risky actions in virtual relations among adolescents according to gender and age, as well as the perceived seriousness of said actions in both variables. Secondly, the aim is to examine the relationship between engaging in risky actions and the perception of their seriousness, considering the influence of age on both aspects.

2. Methodology

2.1. Research Design

This research is a descriptive, quantitative, exploratory and correlational study. This approach made it possible to analyze the phenomena in question and identify the relationships among the different variables. An online questionnaire was used (White, Carey & Daily, 2001) and developed according to the guidelines proposed by Lumsden (2007) and Norman, Friedman, Norman and Stevenson (2001). This instrument has been used and validated in previous studies (Cuervo-Sánchez & Etxague, 2023; Lareki, Fraga-Varela & Martínez-de-Morentin, 2024; Martínez-de-Morentin, Lareki & Altuna, 2021).

2.2. Sample

The sample consists of 2529 adolescents, of whom 1262 are boys (49.9%), 1264 are girls (50.0%) and 3 were classified as other (0.1%), between 10 and 17 years of age and from seven different territories. Specifically, 38.4% come from the Autonomous Community of the Basque Country, 20.2% from Galicia, 15.4% from Navarre, 11.5% from Greece, 5.9% from Cantabria, 4.5% from Madrid and 4.0% from Italy. As far as the age of the users goes, the most numerous group was that of the 12-year-olds, who made up 20.0% of the participants, followed by the 13-year-olds (18.3%), 14-year-olds (17.5%) and 15-year-olds (16.4%). Users who are 11 years old represent 12.5% of the sample and those who are 10 years old accounted for 7.6%. The least represented groups are the 16-year-olds (5.5%) and 17-year-olds (2.1%).

2.3. Instrument and Data Analysis

The instrument used for data collection was an online questionnaire entitled “Anomia digital. Uso de las tecnologías digitales y comportamientos inadecuados” [Digital anomie. The use of digital technologies and inappropriate behaviors], which consisted of 39 items organized in five different dimensions: usage habits, contents and downloads, data management, relations and posts (Martínez-de-Morentin, Lareki, Altuna & Amenabar, 2018). In the protocol, participants were given a detailed explanation and their questions were answered about the meaning of the phrases and the scale used for each item. This study focuses on the dimension of relationships, and it includes 10 items:

- Item 1: I accept friendship requests from people I do not know.
- Item 2: I talk badly in public about a classmate.
- Item 3: I exclude a classmate (from the group, I block them, I ignore them, etc.).
- Item 4: I threaten classmates.
- Item 5: I meet on the street with people that I have met through social media.
- Item 6: I write lies about others.
- Item 7: I make comments that promote bullying (insulting someone)
- Item 8: I talk about very personal things (feelings, relationships, etc.) with people I do not know well.
- Item 9: I spread rumors or criticisms that hurt others.
- Item 10: I do not get involved when someone is being bullied.

Participants evaluated the frequency with which they performed the described actions, using a Likert-type scale with four options: (1) never, (2) rarely, (3) often, (4) always. In addition, they classified the seriousness of the actions according to three levels: (1) minor, (2) moderate, (3) serious. The Cronbach's alpha value for the questionnaire as a whole is 0.665, while for the relationship dimension is 0.836. This reliability index is based on the scores for the questionnaire that consider the items of interest. A value higher than 0.6 generally indicates a reasonable internal consistency (Huh, Delorme & Reid, 2006; Malhotra, 2008).

In order to carry out the study, the administrative teams of the schools and the students were notified, who gave their approval. Informed consent was obtained from the students, according to the favorable decision of the Ethics Committee and the Organic Law 3/2018, of 5 December, on the Protection of Personal Data and the assurance of digital rights. The questionnaire was completed by the students during class time, under the supervision of an instructor from the respective schools.

The statistical program SPSS (version 24) was used to analyze the data. An analysis of the descriptive statistics was carried out, along with comparisons of the means for independent groups (t-test), the calculation of the effect size (Cohen's d), an analysis of variance (ANOVA) and a correlation analysis.

3. Results

The results of the study are presented in this section. First, the statistics of risky actions related to the relationships are described (Table 1) and these actions are analyzed according to gender (Table 2) and age (Table 3); likewise, the correlation that exists between performing these actions and age is also shown (Table 4). Second, the perception of the risk associated with risky actions is analyzed (Table 5) according to gender (Table 6) and age (Table 7). Finally, the correlation between risky actions and the perception of the seriousness is shown (Table 8).

3.1. Risky Actions Associated with Relationships

The main results indicate that most of the adolescents rarely engage in risky behaviors on the Internet. 56.4% (N = 1426) never accept friendship requests from strangers, 78.2% (N = 1978) never say bad things publicly about a classmate. Threatening others or spreading lies is uncommon, with 87.5%

(N = 2213) of the participants never performing these actions. However, 25.5% (N = 645) have rarely left out classmates, and 27.2% (N = 689) indicate that they rarely intervene when someone is being bullied.

	Mean	Standard deviation	Never		Rarely		Often		Always		Total	
			N	%	N	%	N	%	N	%	N	%
I make comments that promote bullying (insulting someone)	1.12	0.433	2241	88.6	183	7.2	28	1.1	23	0.9	2475	97.9
I write lies about others	1.13	0.406	2213	87.5	228	9	26	1	13	0.5	2480	98.1
I threaten classmates	1.14	0.463	2236	88.4	183	7.2	33	1.3	29	1.1	2481	98.1
Relationships: compound variable	1.18	0.34151										
I spread rumors or criticisms that hurt others	1.19	0.495	2102	83.1	303	12	48	1.9	22	0.9	2475	97.9
I tell very personal things (feelings, relationships, etc.) to people I do not know well	1.22	0.537	2039	80.6	355	14	61	2.4	27	1.1	2482	98.1
I meet on the street with people I have met on social media	1.23	0.552	2053	81.2	327	12.9	74	2.9	29	1.1	2483	98.2
I talk badly in public about a classmate	1.26	0.559	1978	78.2	419	16.6	63	2.5	30	1.2	2490	98.5
I leave out a classmate (out of a group, I block them, I ignore them, etc.)	1.42	0.677	1664	65.8	645	25.5	128	5.1	46	1.8	2483	98.2
I accept friendship requests from people I do not know	1.61	0.843	1426	56.4	726	28.7	211	8.3	126	5	2489	98.4
I do not get involved when someone is bullied	1.63	0.867	1414	55.9	689	27.2	212	8.4	141	5.6	2456	97.1

Table 1. Risky actions in interpersonal relationships: descriptive statistics

Gender	N	Mean	Standard deviation	Mean standard error	t	Sig. (bilateral)	Cohen's D
Boys	1181	1.3253	0.39670	0.01154	4.727	0.000	0.194
Girls	1199	1.2582	0.28607	0.00826			

Table 2. Risky actions by gender

Analyzing risky actions by gender (Table 2), the results show a significant difference between boys and girls in terms of risky actions related to interpersonal relationships on the Internet. Boys showed a mean of 1.33, slightly higher than the girls, whose mean was 1.26. This difference, while small, is statistically significant ($p < 0.000$), which suggests that boys tend to engage more frequently in this type of risky conduct. In addition, the responses by the boys show greater dispersion (standard deviation = 0.40) as compared to the girls (standard deviation = 0.29), which indicates greater variability in the behavior of the boys in this context. The effect size ($d = 0.194$) is weak (Cohen, 1988).

In terms of age (Table 3), we could say that as age increases, so does the mean for participation in risky actions, starting at 1.09 at age 10 years and reaching 1.51 at ages 16 and 17 years. This trend suggests that older adolescents tend to engage more in this type of behaviors. The analysis of variance (ANOVA) indicates that these differences are statistically significant ($p < 0.000$), with an effect size ($\eta^2 = 0.110$) that is moderate, nearing large. This suggests that as adolescents grow, their participation in risky behaviors related to relationships on the Internet increases.

Analyzing the correlation between age and risky actions associated with relationships (Table 4), a moderate positive correlation of 0.321 is observed between the variables of age and actions associated with relationships, with a level of significance lower than 0.001, which indicates that this correlation is statistically significant. In other words, as age increases, risky actions also tend to increase.

Age	N	M	Standard deviation	Standard error	ANOVA		
					F (between groups)	Sig. (between groups)	Eta squared
10	182	1.0967	0.17365	0.01287	41.974	0.000	0.110
11	304	1.1280	0.21258	0.01219			
12	478	1.2232	0.29085	0.01330			
13	435	1.3340	0.36086	0.01730			
14	411	1.3521	0.34861	0.01720			
15	392	1.3796	0.35414	0.01789			
16	129	1.5147	0.42685	0.03758			
17	51	1.5137	0.57793	0.08093			
Total	2382	1.2916	0.34685	0.00711			

Table 3. Risky actions by age

		Age	Risky actions in relationships
Age	Pearson	1	0.321**
	Sig. (bilateral)		<0.001
	N	2528	2382
Risky actions in relationships	Pearson	0.321**	1
	Sig. (bilateral)	<0.001	
	N	2382	2383

**The correlation is significant at the level of 0.01 (bilateral).

Table 4. Correlation between age and risky actions

3.2. Perception of the Seriousness of Actions Associated with Relationships

	Mean	Standard deviation	Minor		Mean		Serious		Total	
			N	%	N	%	N	%	N	%
I leave out a classmate (out of a group, I block them, I ignore them, etc.)	1.98	0.85	821	32.5	616	24.4	787	31.1	2224	88
I accept friendship requests from people I do not know	2.01	0.822	749	29.6	730	28.9	766	30.3	2245	88.8
I tell very personal things (feelings, relationships, etc.) to people I do not know well	2.12	0.844	673	26.6	606	24	932	36.9	2211	87.5
I talk badly in public about a classmate	2.15	0.847	651	25.7	573	22.7	992	39.2	2216	87.6
I meet on the street with people I have met on social media	2.19	0.869	666	26.3	465	18.4	1083	42.8	2214	87.5
I write lies about others	2.2	0.858	637	25.2	498	19.7	1076	42.5	2211	87.4
I do not get involved when someone is bullied	2.2	0.835	594	23.5	581	23	1027	40.6	2202	87.1
Perception of seriousness: compound variable	2.2106	0.77279								
I spread rumors or criticisms that hurt others	2.23	0.855	610	24.1	476	18.8	1121	44.3	2207	87.2
I threaten classmates	2.31	0.864	588	23.3	350	13.8	1275	50.4	2213	87.5
I make comments that promote bullying (insulting someone)	2.31	0.873	603	23.8	309	12.2	1292	51.1	2204	87.1

Table 5. Perception of the seriousness of risky actions: descriptive statistics

The most pertinent results on the perception of risk (Table 5) show that the actions perceived as being the most serious are “threatening classmates” (N = 1275, 50.4%) and “making comments that promote bullying” (N = 1292 people, 51.1%), both with a mean of 2.31. Furthermore, 44.3% (N = 1121 people) consider the action “spreading rumors or criticisms that hurt others” to be serious, with a mean of 2.23. In

contrast, the actions least perceived as serious are “excluding a classmate” ($N = 787$ people, 31.1%) and “accepting friend requests from strangers” ($N = 766$ people, 30.3%), with means of 1.98 and 2.01, respectively.

Gender	N	Mean	Standard deviation	Mean standard error	t	Sig. (bilateral)	Cohen's D
Boys	1036	2.0929	0.70513	0.02191	-4.992	0.000	-0.218
Girls	1067	2.2455	0.69655	0.02132			

Table 6. Perception of seriousness by gender

As far as the analysis by gender (Table 6), the results show a significant difference in the perception of seriousness associated with the actions related to interpersonal relationships on the Internet between boys and girls. Girls have a mean of 2.25, higher than the mean of 2.09 for boys, which indicates that they perceive a greater risk for these actions. This difference is statistically significant ($p < 0.000$), even though the variability in the responses of both groups is similar, as indicated by the close standard deviations. Their effect size ($d = 0.218$) lies between weak ($d = 0.20$) and moderate ($d = 0.50$) (Cohen, 1988). These findings suggest that girls are more careful or aware of the risks in online relationships.

In terms of age (Table 7), it can be seen that the means of the perception of seriousness range from 2.04 for the 14-year-olds to 2.36 for the 11-year-olds, while the overall mean for all age groups is 2.17. The standard deviation of the responses indicates a variability that ranges from 0.63 to 0.80, suggesting that the perceptions are relatively consistent among the participants in each group, although with certain differences. The ANOVA analysis reveals an F value of 5.627, with a significance of $p < 0.000$, which indicates that the differences in the perception of seriousness among the different age groups are statistically significant. However, their effect size is small ($\eta^2 = 0.018$), which suggests that the influence of age on these differences is limited.

Age	N	M	Standard deviation	Standard error	ANOVA		
					F (between groups)	Sig. (between groups)	Eta squared
10	165	2.2921	0.79786	0.06211	5.627	0.000	0.018
11	275	2.3582	0.72858	0.04394			
12	411	2.1538	0.75792	0.03739			
13	373	2.1458	0.67327	0.03486			
14	363	2.0457	0.66851	0.03509			
15	354	2.1814	0.63656	0.03383			
16	117	2.0821	0.63213	0.05844			
17	47	2.1085	0.65899	0.09612			
Total	2105	2.1709	0.70455	0.01536			

Table 7. Perception of seriousness by age

		Age	Perception of seriousness
User age	Pearson correlation	1	-0.089
	Sig. (bilateral)		0.052
	N	2528	481
Perception of seriousness	Pearson correlation	-0.089	1
	Sig. (bilateral)	0.052	
	N	481	481

Table 8. Correlation between age and the perception of the seriousness

The results in Table 8 show a weak negative correlation between age and the perception of the seriousness of risky actions, with a Pearson correlation coefficient of -0.089. However, this correlation suggests that the older the participants are, the more likely they are to perceive risky actions as being slightly less serious. However, the bilateral significance value ($p = 0.052$) indicates that this relationship is not statistically significant, as it exceeds the threshold of 0.05.

3.3. Correlation among Risky Actions, the Perception of Seriousness and Age

		Risky actions in relationships	Perception of seriousness
Risky actions in relationships	Pearson correlation	1	-.205**
	Sig. (bilateral)		<0.001
	N	2383	467
Perception of seriousness	Pearson correlation	-.205**	1
	Sig. (bilateral)	<0.001	
	N	467	481

**The correlation is significant at the level of 0.01 (bilateral).

Table 9. Correlation between actions and the perception of seriousness

Table 9 shows a weak negative correlation (-0.205) between the actions related to relationships and the perception of seriousness, indicating that as risky actions increase, the perception of seriousness tends to decrease. This relationship is statistically significant at a level of 0.01, with a bilateral significance of < 0.001 .

Finally, Table 10 shows the correlation between risky actions and perception, taking into account the age variable.

The weak negative correlation (-0.189) between risky actions and the perception of their seriousness suggests that, as the actions increase, the perception of the seriousness of the situation tends to decrease, even when controlling for the age variable. This relationship is statistically significant ($p < 0.001$).

Control variables			Risky actions in relationships	Perception of seriousness
Age	Risky actions in relationships	Correlation	1.000	-0.189
		Significance (bilateral)	.	<0.001
		gl	0	464
	Perception of seriousness	Correlation	-0.189	1.000
		Significance (bilateral)	<0.001	.
		gl	464	0

Table 10. Correlation between actions and perception, taking age into account

4. Conclusions

The use of social media by the adolescent population constitutes a multi-faceted phenomenon that has as many potential benefits as it does significant risks. Nowadays, adolescents use these digital platforms as a means of socialization and expressing their personal interests, which can contribute to the consolidation of their identity and provide valuable emotional support, particularly in the context of communities with shared interests.

However, the adolescent community is exposed to a series of risks inherent to social media and the Internet, such as interaction with unknown users, cyber-bullying behavior, online isolation and exposure to inappropriate or harmful contents.

According to the statistical results of this study, the correlations indicate that as age increases, risky actions also tend to increase ($p < 0.001$). However, it cannot be concluded that a significant relationship exists between age and the perception of seriousness ($p = 0.052$). In a similar manner, as risky actions increase, the perception of their seriousness tends to decrease, even when controlling for the age variable ($p < 0.001$). This finding, viewed from an innovative perspective, suggests that age is not affecting the relationship between risky actions and the perception of seriousness in adolescents.

These data are related to the analysis of the perception of seriousness. The results establish that the increase in the perception of seriousness is associated with a reduction in the performance of risky behaviors. We could say that the perception of seriousness is a variable that plays a crucial role in the modulation of risky behaviors in the adolescent population in the digital environment. These results agree with the findings of Livingstone and Helsper (2010), who propose that the perception of seriousness online among adolescents is inversely related to the frequency with which they are exposed to risky contents. In other words, being familiar with risky actions leads to their naturalization and thus reduces the perception of seriousness.

Along the same lines, previous research (Marwick & Boyd, 2014; Zhu et al., 2021) suggests that the dynamics established on the social media call into question concepts such as trust, privacy, security, respect for the rights of others and healthy coexistence. All these dynamics generate inertia between the adolescent community that go against the perception of the seriousness of their actions and naturalize actions such as cyber-bullying, accepting friendship from someone they met on the Internet or passivity by those who are witnesses to bullying.

Likewise, the results in this regard highlight the importance of developing educational and preventive strategies focused on increasing awareness of the seriousness of online risks, especially among older adolescents, who tend to engage in more risky behaviors, which coincides with other studies, such as that by Cuervo-Sánchez and Etxague (2023). The increased awareness of the seriousness of the risk is one of the most novel aspects of the results of this research. While previous research (Gómez-Tabares & Correa-Duque, 2022; Lareki et al., 2024) has focused to a greater extent on risky behaviors, this research delves deeper into the importance of addressing and raising awareness of the perception of the seriousness of these risks.

On the other hand, these results suggest that educational strategies in digital literacy could improve the perception of the seriousness of the risks, promoting the development of critical thinking about the relationships that are established online and the contents that are produced and consumed. This includes questioning the underlying interests of the messages, the ideologies that are behind them and their subjective interpretation. At the same time, these results can be innovative in the area of the responsible and critical use of the Internet and digital devices, as they suggest how important it is for educational interventions to seek to increase the perception of risk to reduce risky behaviors. In other words, this involves guiding students in a critical reflection on how their actions have implications in their environment and how both individual and collective well-being must be the guiding principle for their actions. This implies, for example, avoiding the normalization of violence on the Internet and fostering co-responsibility in the protection of privacy. Along these lines, the proper perception of the seriousness of the risks may help the adolescent population avoid certain actions, thus reducing situations of aggression or victimization and contributing to a better climate of coexistence in society.

In this sense, the data from this study indicate that adolescent boys engage in more risky actions, but girls tend to have a greater perception of their seriousness. These results agree with previous research (Cuervo-Sánchez & Etxague, 2023; Marwick, 2021; Slonje & Smith, 2008) and with study data that show that people who engage in fewer risky actions are precisely the ones who have a greater perception of their seriousness. In other words, the need to work on the seriousness of their actions as a prevention strategy is reiterated, especially with adolescent boys.

Even though risky conducts are, as a whole, relatively uncommon, the main results reflect areas that require greater awareness, especially in relation to social exclusion (25.5% have excluded classmates on a few occasions) and passivity in the presence of bullying (27.2% indicate that they rarely intervene when someone is being bullied). Quite the opposite occurs with actions related to direct aggressions, such as threats and bullying, which are seen as more serious (50.4 % consider “threatening classmates” to be serious and 51.1% see “making comments that promote bullying” as serious).

The results obtained in this study regarding the passivity in situations of bullying agree with previous research that indicates the social permissiveness towards individuals who hold some type of power or who fall within the socially accepted norm (Marwick, 2021). They also agree with the findings related to the tendency to take a passive stance in situations of bullying, especially when the violence is not perceived as serious, or is supported by the idea of the virtual realm as a mere simulation that is not materialized in reality (Gómez-Tabares & Correa-Duque, 2022). This phenomenon contributes to the acceptance and perpetuation of bullying, by normalizing subtle aggressions and limiting intervention in situations which, while harmful, are interpreted as inoffensive.

Garandeau et al. (2023) indicate that the acknowledgment that observers play a role in events related to bullying has opened up new opportunities for interventions against bullying. In this way, our results also suggest that, instead of focusing intervention efforts exclusively on the aggressors and victims, it could prove promising to focus on modifying the perceptions and attitudes of the observers to encourage them to actively defend their victimized classmates. Programs like KiVa, the strategies of which include support for the actions and active support of spectators towards victimized classmates, have proven effective in reducing school bullying in different countries (Huitsing, Lodder, Browne, Oldenburg, Van der Ploeg & Veenstra, 2020; Kärnä, Voeten, Little, Poskiparta, Kaljonen & Salmivalli, 2011). From this perspective, both the perception of seriousness and the response to critical situations must be a focal point in the educational process. While educational interventions should take on various forms, it is crucial for them to promote the development of critical thinking and competencies before the action occurs, or without it being necessary for a violent situation to occur. This implies fostering reflection in symbolic spaces, promoting the expression of ideas and facilitating debate among peers, with the goal of preventing learning from depending exclusively on the experience after a risky behavior.

In conclusion, in order to counteract risky behaviors and prevent their repetition, it is essential to promote a response based on co-responsibility and the commitment to collective well-being, instead of opting for fear or indifference. For this reason, it is important to involve all educational agents, particularly those who adopt a posture of false neutrality. On a similar note, it is also important to investigate specific interventions to improve the perception of the seriousness of these behaviors, thus reducing the risks in vulnerable populations and fostering a culture of respect, inclusion and solidarity action, in digital as well as real environments.

Declaration of Conflicting Interests

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