Gender differences in using social networks: some research before and after the Covid-19 pandemic period

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Abstract

Due to their widespread and everyday use, social networks are increasingly becoming a subject of scientific research, particularly in efforts to understand their influence on awareness ecology, perceptions, and behaviour. In this paper, we present examples of research conducted both before and after the COVID-19 pandemic. Accordingly, we will highlight one of our previous studies, which would be worth replicating in the current context of more frequent and extensive social media use. A study conducted in Montenegro revealed gender-based differences in the motivations for using social networks, particularly in seeking entertainment and psychological relaxation, as well as in tendencies to follow others' profiles and maintain social connections. Research conducted in the post-COVID-19 period has also identified several notable gender differences in the use of social networking platforms. Women tend to use social media to seek emotional support and foster social connections, whereas men are more inclined to use it for acquiring information, entertainment, and professional purposes. Women also show a stronger preference for platforms focused on communication and visual content, while men favour those centered on content consumption and discourse. Overall, research indicates that gender-based patterns in expressing social needs and emotions on social networks have remained relatively consistent before and during the COVID-19 pandemic. However, there are also studies in which gender is not recognised as a significant factor in the development of habits related to social media use. Due to the lack of systematic psychological research on this phenomenon in the context of Montenegro, and considering the importance that social media holds for the community, it is important to conduct further empirical research involving a broader population sample and a more detailed examination of the role of sociodemographic factors, including gender, in the formation of digital habits.

Key words: gender differences, social networks, Covid-19 period

Introduction

The inherent human need for communication, along with globalisation trends that significantly shape the principles of information exchange, has con-

tributed to the affirmation of social networks within the online communication sphere. Efforts to streamline the progress of civilization toward the creation of a „global village," aimed at enabling more direct exchange of human and other resources, likely encourage individuals to respond to changes more openly and with greater readiness. The technological boom, particularly with the advent of the Internet, has reinforced the need to express aspects of one's private life more transparently—and to expect the same from others. In this context, it becomes socially acceptable to observe the lives of others in a covert, often voyeuristic manner; to manage one's online identity; to misuse someone else's communication or identity; and in doing so, incite mistrust or even provoke paranoid reactions. It is possible that such behaviour become more pronounced during and after the COVID-19 pandemic, as people increasingly communicate online from more private spaces. As social networks become an integral part of the daily lives of a growing number of people, and as they play a key role in strengthening and forming new social connections (Kwon, Park, & Kim, 2014), the needs they fulfill are numerous. Understanding the motivations behind social media use contributes to increasing the number of online interactions and facilitates the creation of more effective procedures for regulating this digital space.

For example, it has been observed that since 2007, more than half of all travel arrangements have been made online (Laurent, Marcotte, & Page, 2010), and that some of the most frequently used platforms include Facebook, Twitter (Martin, 2009; Pempek, Yermolayeva, & Calvert, 2009), YouTube, MySpace, and LinkedIn. These platforms have become part of everyday life (Hallikainen, 2015), with many users checking their accounts at least once a day and actively participating in online activities (Joinson, 2008; Lenhart, 2009). Oberst identified that American teenagers lead in social media usage—73% of them are active on social networks (Dwamena, Kwabla, & Kanyir, 2016). Given the significant time they spend online, they are often the focus of research on the effects of social media on academic performance (Bond, Chykina, & Jones, 2017) and on perceptions of their own physical appearance (Kim & Park, 2016). The rapid expansion of social media usage highlights the need to understand the motivations behind this type of communication and interaction, especially considering that these platforms are increasingly used in everyday business transactions as well (Hallikainen, 2015).

Boyd and Ellison (2007) define social media as digital platforms that allow individuals to create public or semi-public profiles within specific boundaries, compile a list of other users with whom they connect, follow others' activities, and consume shared content. Bartlett-Bragg (2006) views social media as a platform that enhances group interaction to support collaboration, networking, and information exchange in digital environments.

The new technological world enables every individual to share their thoughts via a constructed online identity, while also offering the option to hide behind false identities, evading responsibility. Thus, while social media fosters interactivity, it also enables the proliferation of negative social patterns. Although their original purpose was to establish and maintain social connections, social

networks are now frequently used for commercial, political, and other forms of non-emotional interaction. This reflects the broader expansion of social media toward supporting both social and economic development.

Furthermore, social networks increasingly serve as tools for civic engagement and socially responsible behaviour, such as participation in humanitarian efforts, environmental advocacy, consumer rights activism, or commenting on sports events. Recent global events, such as the COVID-19 pandemic and wars resulting in significant human casualties, have undoubtedly influenced online behaviour and, consequently, the frequency and nature of social media use.

Theoretical perspectives on gender difference

Gender differences in needs and behaviour manifested in the virtual world can be interpreted through Social Role Theory and Gender Schema Theory. These are socio-psychological theories that explore similarities and differences in the social behaviour and characteristics of the genders. Social Role Theory is based on the belief that gender differences in behaviour arise from the distinct roles men and women perform in everyday life (Lin, Li, Califf, & Featherman, 2013), as well as from differences in gender socialisation—that is, the social influences that shape different needs, beliefs, and abilities. Gender Schema Theory suggests that societal expectations typically dictate that men should become independent and strive for higher status within a group. As a result, men are assumed to have social advantages, are encouraged to focus on tasks (Williams, Consalvo, Caplan, & Yee, 2009), and are socialised to value competitiveness and power. In contrast, women are more often encouraged to develop interpersonal skills and caregiving tendencies (Eagly, 1987).

From the earliest stages of development, parents guide children's needs and behaviour in accordance with prevailing gender stereotypes. The effectiveness of this early socialisation is reflected in play behaviour: girls often assume maternal roles and demonstrate care for others as the core theme of their play, while boys tend to focus more on process and achievement. Accordingly, passivity is traditionally associated with femininity, and initiative with masculinity. Such a social environment fosters the tendency for individuals to align their gender identity with expected societal and occupational roles. As a result, women are more likely to engage in activities related to domestic skills, while men gravitate toward roles that offer direct economic benefit (Eagly, Wood, & Diekman, 2000).

Gender Schema Theory emphasises that gender differences should be considered foundational to the organisation of cultural norms and social functioning (Bem, 1981). Given that individuals begin to form „naive" gender theories at an early age—internalising socially constructed gender characteristics—it is not surprising that, in some studies, women reported greater concern that their Facebook profiles might damage their reputation (Lin et al., 2013), especially considering the traditional expectation that women should maintain a lower public profile.

Unlike men, women are generally not expected to be highly successful outside the home. Parents often do not raise daughters with the belief that they will develop competencies for tasks that are stereotypically considered male (Aronson, Wilson, & Akert, 2005), or for roles in which men have been historically more successful.

Research on social networks usage

The use of social networks has many benefits, although some adverse consequences have also been identified – particularly addictive behaviour and bad habits that social networks can promote and reinforce. The population particularly affected includes those undergoing not only physical, but also intellectual, social, and emotional development. Schill argues that social networks encourage negative behaviour among teenagers and that those who use them are more likely to consume alcohol and drugs (Wang, Chen, & Liang, 2011). While social networks can be used by teachers and students as tools for creating and sharing knowledge, research shows that individuals who frequently check their Facebook accounts and monitor online activity on a daily basis tend to have lower academic performance (Junco, 2012; Paul, Baker, & Cochran, 2012), and that the internet is used less for educational purposes (Joshi, 2016). However, other studies suggest there is no clear link between time spent online and academic achievement (Martin, 2009). The commercial interpretation of the internet has emphasised its entertainment value while neglecting its potential for professional communication, education, and the development of interpersonal relationships. A study on the pedagogical impact of social networks on students in applied studies (Mehmood & Taswir, 2013) found that 56% of respondents did not have more friends online than in real life, while 44% did. Furthermore, 80% of students use social networks on their phones, primarily for chatting; only 6% use them to watch videos, 8% to create quizzes, 8% for blogging, 14% to read articles, and 14% to communicate with teachers.

The conclusion of such studies is that social networks should be used in a disciplined manner, as they can divert attention away from education. Several key factors explain the rapid and widespread use of social networks. These include their ease of use (regardless of education level), the ability to control the display and exchange of information, the opportunity to glimpse into others' lives and engage in informal learning, the chance to establish broad social connections without the pressure of direct contact with unfamiliar environments, and the possibility of manipulating those interactions. In addition to fostering social relationships, social networks are also useful for spending leisure time, learning about others, and monitoring school-related activities (Stutzman, 2006). Finally, they have proven useful for the exchange of psychological support and even for therapeutic purposes. Unlike older generations who relied on newspapers and television for information, younger people use social networking platforms to strengthen peer relationships and to share information

relevant to their personal development. It is important to explore user habits, needs, and behaviour on social networks in order to understand value systems and predict online behaviour. Therefore, special attention should be paid to certain issues that often arise from social network use, such as: fear and paranoid reactions in online spaces, the need to create false identities, diminished responsibility for words and actions, the promotion of unrealistic or unethical standards of beauty and success, narcissistic tendencies, egocentrism, and similar phenomena.

In the past, there were very few studies focused on behaviour and motivation related to internet use (Bourdeau, Chebat, & Couturier, 2002). In American studies examining the rational and irrational motives behind visiting websites, some researchers argue that differences in how networks are used stem from users' social and demographic characteristics, while others attribute these differences to users' value systems (Laurent, Marcotte, & Page, 2010). Regarding socio-demographic characteristics, research suggests that the internet is often perceived as a masculine environment, although women are increasingly active participants (Weisser, 2004). The most diverse usage of social networks is observed among the student population (Misra, Dangi, & Patel, 2015; Bhakta, 2017). Amiel and Sargent (2004), in a study involving 210 students, investigated students' motivations for using the internet. Their findings indicate that extroverted individuals do not view the internet as a substitute for human contact but rather as a tool to achieve specific goals. In contrast, individuals with high scores on the psychoticism scale tend to use the internet for deviant purposes (e.g., viewing pornographic content) and to seek information about what might happen to them in the future. Those with high levels of neuroticism use the internet to fulfill their need to belong and to gather information as a way of managing anxiety.

To our knowledge, such psychological studies have not been conducted at the University of Montenegro. However, a study conducted in Serbia on a sample of 208 students examined the perceived potential of social networks in university education (Vasilijević, 2016). The research found that about 72% of respondents actively use social networks, with half using them to stay in touch with family, and the rest using them as learning tools. The author questioned the sincerity of the responses, noting that socially desirable answers are common in self-assessment, and that "learning" does not necessarily refer to formal education. According to her conclusions, opinions on the role of social networks in teaching are divided, and traditional teaching models tend to be promoted even in online spaces (Rogers, Liddle, Chan, Doxey, & Isom, 2007). Traditionalism is particularly evident in gender differences regarding the reasons students spend time on social networks.

Sudden changes in internet accessibility have enabled greater participation of women online, particularly in the use of social networks (Kimbrough, Guadagno, Muscanell, & Dill, 2013). Since September 2014, women have slightly outnumbered men in social media usage (Duggan, Ellison, Lampe, Lenhart, & Madden, 2015). In recent years, two main lines of research have emerged in rela-

tion to internet use: one focused on social and psychological effects, and the other on gender differences (Shaw & Gant, 2002). Some studies have attempted to develop models to identify and explain the factors that motivate individuals to continue using social networks, taking gender differences into account (Lin, Featherman, & Sarker, 2017).

It has been observed that men are more likely to use the internet for information gathering and entertainment, while women use it primarily for interpersonal communication. Men reportedly use the internet 107 minutes longer per day and focus more on political and sports content, whereas women spend more time on fashion blogs and show greater interest in health-related topics (Alčaković, Čavić, & Bošković, 2014). Information technology is still largely perceived as a male-dominated domain, with men, as early adopters, having shaped much of internet culture and engaging more frequently in problematic forms of use (Morahan-Martin, 1998). Earlier studies found that women generally spend more time on the internet engaging in relationship-centered activities and are more likely to discuss personal relationships openly, with the aim of improving them (Baxter & Wilmot, 1983). Women also tend to be more extroverted and report higher levels of perceived social support (Frison & Eggermont, 2015), while men use the internet more for general information-seeking purposes, often without forming deeper social bonds (Krasnova et al., 2017).

Even in professional contexts, women are more likely to seek out social interaction (Brell et al., 2016). Gender differences have also been found in how quickly individuals adapt to new technologies, the consistency of usage, message length and interactivity, and whether the platforms are used for professional or social purposes (Barrett & Lally, 1999; Chun, 2013). Men tend to adopt new technologies faster and are more likely to experiment with them randomly, while women prefer to hear about others' experiences before adopting new platforms and are generally more cautious. Men write shorter, more concise messages (Gutiérrez Maldonado, Mora Garcia, & Edipo, 2001), whereas women engage in more elaborate and meaningful communication and are more likely to integrate knowledge acquired through social networks. Men are also more likely to create blogs and use web platforms for business purposes. They often prefer LinkedIn for professional networking, while women more commonly use Facebook for social interaction (Gokulsing, 2014). Women tend to favour email communication, while men prefer using websites (Jackson, Ervin, Gardner, & Schmitt, 2001). According to Venkatesh and Morris, women are more likely to adopt technologies perceived as simpler and experience more anxiety when using computers (Goswami & Dutta, 2016).

A study by Rousseau and Puttaraju (2014) found that men use social networks to promote brands and celebrities, whereas women tend to observe others' content, create and share original material, and use hashtags and other tagging tools more frequently. Facebook was the most commonly used platform, followed by LinkedIn and Twitter, with 32 different use cases identified.

Girls use Facebook and Twitter more often than boys (Manago, Taylor, &

Greenfield, 2012), share videos and messages more frequently, maintain social ties, fulfill academic needs, and post public messages. In contrast, boys spend more time gaming and seeking new connections (Weisser, 2004; Tüfekci, 2008; Mazman & Usluel, 2011; Muscanell & Guadagno, 2012; Misra, Dangi, & Patel, 2015). Unlike girls, boys do not necessarily develop deeper social relationships when using social networks—they are more likely to seek new acquaintances or flirt, while women are more inclined to maintain existing relationships (Muscanell & Guadagno, 2012). Social media platforms are important tools for increasing the visibility of women in public spaces. Studies have shown that men are quoted more often and that their online publications receive more attention (Paul-Hus, Sugimoto, Haustein, & Larivière, 2015). There are two main approaches to bridging the gender gap in online representation: encouraging greater female participation online, and understanding the different, often gendered, styles of internet use (Mitin & Voiskounsky, 2005). Looking specifically at the study's target population—female students—it was found that they often feel less confident using computers, partly due to greater parental support being provided to male children in this domain (Shashaani, 1997). Gender differences have also been observed in self-efficacy, particularly in completing complex tasks, but not necessarily in simple ones (Busch, 1995). As a result, women tend to show higher levels of computer anxiety and lower self-efficacy (Jackson, Ervin, Gardner, & Schmitt, 2001). These patterns suggest that experience, parental encouragement, and gendered socialization are key predictors of online behavior.

During and after the COVID-19 pandemic, gender differences in social media use were further confirmed. A meta-analysis by Tifferet (2020) found that women are significantly more likely than men to offer and receive social support via social media. These findings reinforce the idea that women are generally more relational and emotionally expressive online, while men tend to prefer task-oriented or instrumental communication. Twenge and Martin (2020) reported that moderate to heavy digital media use was more strongly associated with lower psychological well-being in adolescent girls than in boys. Girls are more likely to spend time texting, while boys prefer gaming. This research also indicates that girls are more people-oriented, while boys focus more on processes. Recent studies have shown that female academics tend to express more empathy than male counterparts, discuss personal issues more frequently (Panchendrarajan et al., 2025), and engage less in academic self-promotion, especially as they advance in their careers (Pen et al., 2025). Women are about 28% less likely than men to promote their research on platforms like Twitter/X. Experimental research has shown that women rate their own performance lower than men with equal achievements, even when controlling for confidence, incentives, and ambiguity (Exley & Kessler, 2022). This gender gap in self-evaluation emerges as early as sixth grade. In adolescence, girls tend to use social networks to express emotions, build social connections, and seek validation for their appearance, while boys are more inclined to use social media for competition and status (Manago, Walsh, & Barsigian, 2023). In the 2023 sociological study (Gudić et al., 2024), it

was concluded that women use social networks more frequently and take a more creative approach to content editing, while men tend to use them primarily as a means to gain popularity and connect with others. Although earlier studies have confirmed the existence of gender-based differences in social media use, particularly in terms of communication styles and emotional expression, it is important to acknowledge that not all research supports these findings. A recent study by Gaborov et al. (2022), conducted on a sample of 744 students in Serbia aged 11 to 18, did not confirm the previously observed gender differences. In this study, gender was not found to be a significant determinant in shaping internet usage habits. Instead, age emerged as a more influential factor, indicating that developmental stage plays a crucial role in how digital behaviour evolves over time. These findings suggest that gender-based patterns in online behaviour may not be as universal as previously thought and highlight the importance of considering additional variables such as age, context, and cultural background when interpreting social media usage trends.

In the following section, I will reflect on a research study I conducted within the framework of a course I was teaching to students of early childhood education. The primary objective of the study was to examine their motivations for using social media. Subsequently, Ithe observed gender differences, although this was not the original focus of the research. I consider this to be one of the key limitations of the study.

Author's unpublished research conducted in Montenegro

In an unpublished study I conducted with a student population, gender differences were identified only within a specific category of social media usage needs. First, it should be noted that this research was carried out in 2017—prior to the COVID-19 period, which brought significant changes to communication and everyday life. Therefore, it is essential for future research to take this data into account in order to enable comparisons with contemporary gender differences in the use of various social media platforms. The data was collected from students at the University of Montenegro. The sample consisted of 200 participants, including 117 female students (58.5%) and 83 male students (41.5%). All participants were studying for professions in which pedagogical competencies are particularly important—namely, students of early childhood education, primary education, psychology, and pedagogy. As future professionals in these fields, they will directly address the needs of their students and clients and serve as role models in terms of attitudes and behaviour.

The sample was designed in accordance with the number of students enrolled in these programmes and adequately reflects the gender and social status characteristics of the target student population. Information on place of upbringing was excluded, as nearly 80% of the participants reported being raised in the central region of Montenegro. Table 1 presents the demographic data of the sample.

Table 1. Demographic data of the respondents.

Measure	Items	Freq.	Percent
Gender	Male	83	41.5%
	Female	117	58.5%
Age	18 - 20	115	57.5%
	21 - 23	65	32.5%
	24 - 25	20	10.0%
	First	57	28.5%
Years of study	Second	46	23.0%
	Third	63	31.5%
	Fourth	34	17.0%

During the specified period, the most frequently used social network among students in the overall sample was Facebook, with 58 male students (69.9%) and 67 female students (57.3%) reporting its use. Figure 1 illustrates the frequency of usage of various social networks. These findings reflect the data from the time of the study, and it is likely that current data would differ significantly, as young people are increasingly using platforms such as TikTok. However, recent statistics show that Facebook still maintains its leading position ahead of YouTube, WhatsApp, and Instagram (Duarte, 2025).

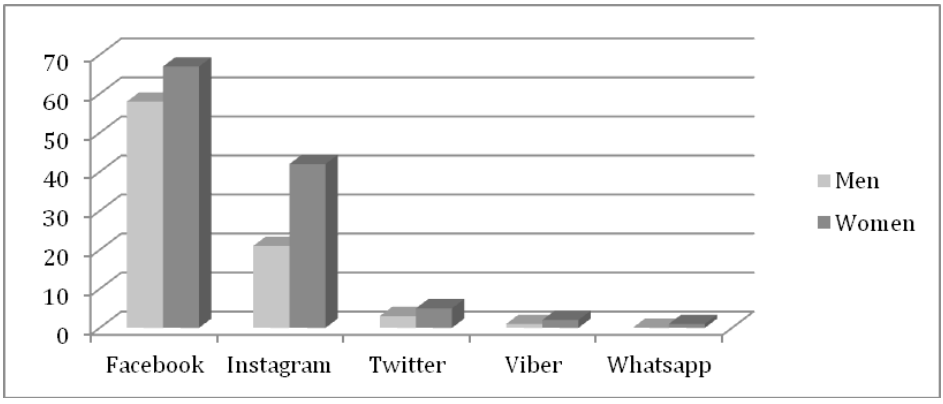

Figure 1 Gender and most used social networks

As shown in Figure 1, Instagram is second in the order of usage frequency with 42 (35.9%) respondents of the total sample of female students and 21 participants (25.3%) of the total sample of male students. The reason for this is probably in the fact that, according to its characteristics, Facebook offers more communications options, immediate interaction and focusing on individuals that we have chosen, while Instagram allows editing and displaying images, in short, offers visual imagery of the social environment without complicated interactions. The table below shows the values of Chi-square coefficient and significant gender differences in the expression of certain needs for social networks usage.

Table 1 Gender differences in the expressed needs for social networks usage

Gender	Chi-square	df	p	c
Getting informed	2.050	2	0.359	0.104
Contact with close ones	*15.591*	*2*	*0.002**	*0.187*
Quality of social relations	0.874	2	0.646	0.068
Searching for partner	0.962	2	0.325	0.072
Following activities of another	*32.283*	*2*	*<0.001**	*0.298*
Marketing	3.239	2	0.198	0.131
False identity	0.573	2	0.751	0.055
Entertainment or therapy	*41.520*	*2*	*<0.001**	*0.374*

*Significant at the .01level

Table 1 presents statistically significant gender differences in the expressed needs for social network usage, differences were observed in three main areas: maintaining contact with close individuals, following the activities of others, and using social networks for entertainment or as a form of therapy. Male students are more likely to use social networks for entertainment and stress relief, which may reflect a tendency to seek distraction from daily pressures through easily accessible forms of amusement. Conversely, female students demonstrate a stronger orientation toward maintaining social connections and actively following the profiles of others, indicating a greater focus on interpersonal relationships and social bonding. These findings align with contemporary theories of gender roles and social expectations, which propose that women are socialised to prioritise nurturing relationships and providing emotional support, while men tend to emphasise problem-solving and individual leisure activities. No significant gender differences were identified in other needs, such as information seeking, partner searching, marketing, quality of social relations, or the creation of false identities. This suggests that these particular needs may be more universal and less influenced by gender, consistent with the increasing digitalisation and homogenisation of social media usage patterns among youth.

We have not identified any recent studies conducted in Montenegro that systematically examine perceived gender differences in social media use. Nevertheless, data from the *Digital 2025* report indicate that, at the beginning of 2025, more women than men (52.7% compared to 47.3%) were using social media. However, there is no available information regarding potential differences in users' motivations, needs, or usage patterns. It is possible that non-governmental organisations conducting gender-related research may hold more detailed data, but such information is currently not accessible to us. Considering the pervasive role of social media in shaping and reflecting everyday life, particularly their function as a powerful agent of socialisation among youth, it is essential to promote systematic and interdisciplinary research as a foundation for developing responsible and inclusive digital policies.

Conclusions

Due to their daily application in various spheres of life, social networks have become an interesting topic for many studies. In addition to their positive effects, which we recognise in providing opportunity for affirmation of social needs, exchange of experience and information, providing marketing services and the like, the negative effects we observe, among other things, in more and more evident misuse of this sphere to harm others and manifest behavior devoid of responsibility and pro-social values. Their impact on the population of adolescents is particularly monitored, due to the assumption that they have the strongest influence in this most sensitive stage of development, and due to the fact that social networks have gone through expansion precisely among this population. Because of this, it is important to identify the needs and motivations for social networks usage in order to develop mechanisms for easier and more accurate prediction of behaviour and prevent abuse. Among the numerous factors that influence the various purposes of using social networks, the importance of researching differences caused by gender is also recognised.

The age-old questions of gender differences transferred into the world of modern technology. Studies devoted to identifying these differences in the expressed needs and behaviour in the field of online communication are best testimony for this. As a socialised category, gender is a reflection of the social environment expectations, a product of its persistence to direct the development of individuals, often based on the belief that these expectations are in accordance with the biological predispositions of individuals (gender). Social role theory and Gender schema theory provide the most comprehensive description of long-socialised and involved differences between the genders, and long pertaining stereotypes about them. When it comes to the topic of this paper, the stereotypes that the online world is more suited for men probably comes as consequence of men being more present in it and the fact that men more often developed these technologies and women have probably become part of these technologies when they were commercialised and when they mastered everyday life.

Both before and after the Covid-19 period, research confirms that gender differences in social networks usage reflect in the fact that women focus more on the needs of others, communication with close ones, giving advice and dealing with problems. Unlike them, men are more likely to focus on the processes, and for them networks are ways to fulfill their needs for entertainment and fill leasure time. These results are consistent with the postulates of gender theories, with the expectation that women should take care of others, that they focus more on the quality of social relations and problems of others and that men are more relaxed in this sense. The long-surviving traditional concept finds its subtle forms in technologically advanced society. It is therefore important to relax community from the above-mentioned expectations, speak openly about the consequences of these expectations and habitual differences, and instead of external regulators strengthen the internal resources of individuals.

The results of the study highlighted in this paper, conducted at the University of Montenegro, confirmed certain gender-based tendencies in social media use, particularly related to emotional connection and entertainment. However, recent research, such as the study conducted by Gaborov et al. (2022), did not confirm gender differences in the use of online content, which may indicate that age and broader cultural shifts have a greater influence on usage patterns than previously assumed. Future research should adopt a multidimensional approach, exploring how gender intersects with other socio-demographic variables and how these influence behaviour in online spaces. Understanding the psychological and social implications of digital interactions is especially important for younger generations growing up in a technologically mediated world. In an era where digital spaces shape identity and behaviour, it is essential to move beyond stereotypes and create environments that foster personal authenticity and social responsibility.

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