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Digital citizenship and paradigm shift in generation z's emotional communication: Social media's role in shaping Iranian familial bonds

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Abstract: This study examines the intricate interplay between the digital environment and the evolving communication dynamics of Generation Z, specifically focusing on the impact of social media on familial bonds. The research objective is to explore the ways in which Generation Z's social media consumption patterns shape their relationships and lives, providing insights into the intricate interplay between technology and human connections. Adopting Hirschi and Wellman's theoretical framework, this investigation employs a survey method, utilizing a questionnaire to gather data from 384 Iranian Generation Z social media users. The findings reveal a significant and negative correlation between family bonds and social media usage, dependency on the platform, and support received from it. Excessive use diminishes interaction and intimacy, highlighting social media's potential consequences for family relationships, which are crucial for individual and societal well-being. The study underscores the significance of balanced social media usage and encourages initiatives promoting face-to-face interactions, empathy, and responsible digital citizenship. The findings hold significant implications for academics and policymakers in developing strategies that promote responsible digital habits, foster healthy relationships, and contribute to digital citizenship advancement. This may involve regulatory initiatives, guidelines for social media platforms, and public awareness campaigns emphasizing the importance of balanced digital habits.

Keywords: social media; generation z; digital native's family bond; digital citizenship; Iranian digital culture; digital well-being; emotional communication patterns; digital literacy

1. Introduction

Digital natives refer to a generation of individuals who have grown up amidst the widespread availability of technology, such as computers and the internet. Marc Prensky coined this term, emphasizing that these individuals are "native speakers" of digital languages, including those used in computers, video games, and the internet (Kivunja, 2014). As stated by Prensky, individuals born in the digital era naturally adapt to technology at a young age, making it an essential component of their daily experiences (Ali, 2024; Prensky, 2001). They perceive the world differently compared to those less exposed to modern technology (Haji Dehabadi and Salimi, 2019). Online communication platforms and social media have become the primary means of communication for Generation Z, creating a bridge between digital interactions and social relationships (Khajeheian et al., 2020). The integration of technology into their everyday lives has influenced their expectations, values, and consumption patterns

(Faramarziani et al., 2016). As digital natives gain financial independence, understanding their communication style, social media usage, and preferences becomes crucial for various industries. This is because they constitute a significant portion of the new workforce, shaping the future of both society and the workplace (Chillakuri, 2020; Djafarova and Bowes, 2021; Singh and Dangmei, 2016). Taking into account the exponential rise in cybercrimes, particularly within social media platforms, as well as, the dynamic shifts observed in criminal activity concerning the nature, location, and demographics of both offenders and victims (Haji Dehabadi and Salimi, 2019) understanding digital natives' communication style, social media usage, and preferences is vital for ensuring social security. Consequently, gaining insight into the digital native population can greatly enhance our comprehension of contemporary society and its forthcoming trajectory.

Social media serve as a prevalent medium for digital natives, who are renowned for their extensive knowledge and acute awareness of various social media platforms. Some scholars even liken social media to the inherent environment for this demographic (Ojohwoh, 2018). Social media hold a significant and pivotal position in shaping how their users perceive their surrounding environment (Faramarziani et al., 2016). According to the cultivation hypothesis, social media have a significant impact on people's perceptions of reality (Nevzat, 2018). Social media sites create synthetic worlds where users construct avatars to mimic their real-life habits. The more time individuals spend consuming media, the more likely they are to believe that the world is similar to what they encounter on social media (Qolizadeh, 2019). This concept can be applied to familial discourse, as media has the potential to influence individuals' perceptions of what constitutes ideal family communication. For example, excessive consumption of social media depicting families as perpetually content and devoid of conflict may lead to unrealistic expectations regarding one's own familial interactions. By presenting diverse facets of social relationships, they highlight novel conditions and requirements from various aspects of social existence for their audience (Qolizadeh, 2019). By illustrating the relationships governing life and different behavioral styles in the living environment, they introduce a new way of life and thinking to their audience, affecting communication patterns and lifestyle (Kalhori and Khademian, 2020). Social media serve as platforms that foster emotional experiences for preadolescents and adolescents, simultaneously enabling younger users to engage in a variety of behaviors and interactional patterns (Wood et al., 2016). Consequently, social media may contribute to the process of identity formation (Van Dijck, 2013; Wood et al., 2016). In essence, digital natives can utilize social media to explore and experiment with their identities within their own sphere of influence, where they hold control over what, how, and with whom they share information.

Therefore, social media have become one of the vital components of the lives of digital natives and part of their identity around the world, including in Iran (Khajeheian et al., 2020). Since social media have gradually occupied most of the daily lives of teenagers, there are concerns regarding its influence and opportunities, as well as challenges to users' lives and future society. The review of literature highlights both the positive effects of social media for digital natives, such as feeling more connected to friends, expressing themselves creatively, and receiving support and advice (Bhadra and Kumar, 2023; Polanco-Levicán and Salvo-Garrido, 2022; Youssef and Al Malek,

2023), and its potential negative influences. Several studies have investigated the negative consequences of social media, including its impact on academic progress (Luo et al., 2020), social communication, sleep quality (Woods and Scott, 2016), mental health (Abi-Jaoude et al., 2020; Spies Shapiro and Margolin, 2014; Woods and Scott, 2016), and family bonding (Huang et al., 2023; Sultana, 2017). Digital natives find it difficult to be away from the internet for even half a day, which has caused various harms, such as those related to family, communication, emotional, psychological, physical, and economic well-being (Reid, 2023). Psychologists and family counselors emphasize the decline in conversation time and the lack of conversation skills to express affection or resolve differences, leading to numerous problems (Faraji, 2022).

In accordance with the provided argument, a two-sided issue has been identified, serving as the foundation for this research. As stated, comprehending Generation Z's communication style, social media consumption, and preferences is vital due to their substantial presence in the contemporary workforce and consumer market, continuously shaping societal and workplace dynamics. The second aspect of this problem involves a more profound understanding of how social media, an integral part of their lives, affects their relationships with family members, which is a crucial determinant of well-being, communication patterns, values, and societal norms for these digital natives (Procentese et al., 2019) and society (Carvalho et al., 2015). In the context of Iran's Generation Z demographic, social media holds a significant level of popularity (Khajeheian et al., 2020). This study aims to investigate the social media consumption patterns among Iranian users aged 13 to 18, as digital natives in the country. The objective is to examine how the digital native social media consumption style (in terms of quantity, type of usage, dependence, and the extent of interest in this area) impacts familial bonds.

2. Back ground

Family bonds and the use of social networks

Several studies have found that information and communication technology, including hardware (e.g., computers, smartphones, game consoles) and software (e.g., email, online social networks), causes qualitative changes in family functioning. These transformations manifest in the emergence of novel interaction scenarios and the reconfiguration of existing family connection patterns (Carvalho et al., 2015). (Carvalho et al., 2015). Particularly, the impact of social media on different family functions has been studied in recent literature. Ante-Contreras (2016) found that excessive use of social media among parents could lead to distraction, reduced relationships, and daily conflict, which may result in distress in parenting, reduced attachment to children, and the development of negative traits such as punishment. Furthermore, overuse in children may result in heightened levels of anger, diminished self-assurance, and reduced communication proficiency, which in turn can adversely impact their bond with their parents (Ante-Contreras, 2016). Research findings indicate that intergenerational conversations in families have declined significantly, from two hours a decade ago to just 17–20 min currently. This reduction in family communication has exacerbated various issues, including a lack of guidance and

intimacy at home, as well as an increased prevalence of depression, despair, and addiction among young people. (Huang et al., 2023). The percentage of individuals claiming less communication with family at home increased from 8% in 2000 to 34% in 2011. Instead of interacting with family and friends, 32% reported utilizing social media or texting during meals (47% of 18–34-year-olds) (Watt, 2016). It means because of social media, while family members are physically together, they are engaging with their own digital devices in the online world, neglecting the company of their loved ones around them. Adlipour et al. (2015) reported a significant association between social media use and a reduction in daily family activities, increased parental distrust towards children, and decreased face-to-face communication with family members. This was discovered through a survey of 380 young social media users at Isfahan University. Livingstone and Helsper's study (2008) revealed that children aged 12–17 are more exposed to cyber risks than other age groups. With virtual friends replacing family interactions, teenagers become more vulnerable to risks, and the consequences are more severe. Parents struggle to balance the educational and social benefits of media use with the negative effects on children's attitudes, behaviors, and safety. Implementing restrictions and filters is not the ideal solution; rather, improving family relationships, empathy, group gatherings, and increasing media literacy can help strengthen family bonds.

In the realm of academic discourse, the significance of familial communication and bonding is paramount to the overall well-being and stability of a family unit (Miller-Day, 2017). The concept of family bonding encompasses various aspects, such as the nature of interpersonal communication, the distribution of authority, emotional intimacy, mutual interest, and the establishment of harmony among family members. This intricate web of relationships serves as the cornerstone for maintaining the health and emotional well-being of individual family members, as well as fostering a strong foundation for the family as a whole (Abbasi Shawazi and Abbasi Ateshgah, 2018; Qolizadeh, 2019). It is through families' communication that individuals learn how to organize meanings. Forming family relationships leads to the creation of a system within which members participate in an interactive process of meaning-making (Miller-Day, 2017). Family bonding, therefore, holds paramount significance in human life, contributing substantially to the overall well-being of individuals and the family as a collective entity. This involves investing in quality time spent with family members, creating cherished memories, and nurturing strong relationships (Nee and Wong, 2014).

In contemporary times, the digital domain has significantly influenced family communication, altering both the scope and quality of interactions among family members. This shift has, in turn, impacted family values and patterns (Procentese et al., 2019). A study conducted by Barati and Kafashi (2017), involving a survey of 384 families, revealed the strength of intra-group relationships within families. Notably, this factor extends its influence to the extra-group relations of the family unit. As dependence on social media among family member increases, there is a consequent decline in intimate relations. This phenomenon is accompanied by a heightened desire for isolation, loneliness, an increased propensity for law-breaking behaviors, and a diminished sense of responsibility. In a recent study involving 400 high school students from Shiraz, a significant correlation was established between the extent and

nature of social media usage and the strength of familial bonds. It was observed that increased engagement with social media platforms led to a decline in family relationship cohesion, further exacerbating issues related to value discrepancies and generational gaps within the family unit (Abbasi Shawazi and Abbasi Ateshgah, 2018; Algavi et al., 2021). In a study conducted by Asghari and Kardan Moghaddam (2015), involving 200 high school students from Gonabad, it was observed that the increasing addictions to the Internet, social media, and mobile phone dependency have a detrimental effect on family bonds, resulting in the deterioration of familial relationships.

3. Literature review and theoretical frame work

The subject of "generations" has sparked interest among media studies scholars due to the rapid changes brought about by "information and communication technologies" ICTs (Colombo, 2011). These changes have radically changed cultural transmission and socialization, highlighting gaps and differences between social groups and age cohorts (Tamme and Siibak, 2012). Young adults and children are often defined by their relationship to technology, with labels like "digital generation" (Prensky, 2001) and "net generation" (Tapscott, 1998) used to signify their preferences and common characteristics. Though several scholars have established sociological approaches to emphasize the overall changes in the socio-cultural sphere, such as the weakening role of family and close relationships in the eyes of these new generations (Helsper and Eynon, 2010; Herring, 2008), Lanigan (2009) employs a sociotechnological model as an analytical framework to study the perception of the influence of personal computer use on family relationships. This approach aims to explore the contextual intricacies of ICT interactions within family life.

Different studies have revealed that ICTs and the advent of new media have revolutionized the way people interact with each other, including changing family communication patterns (Carvalho et al., 2015). The Family communication patterns theory posits that families should establish a shared social reality to function optimally, which involves shared understanding, similar perceptions, shared attitudes, and accurate beliefs among family members (Samek and Rueter, 2011). Leon-Del-Barco et al. (2018) emphasized the key influence of family interaction and communication on teen communication and behavioral patterns. Several studies show the importance of family relationships and bonds in the lives of Generation Z individuals. (Jauhari et al., 2022; Thomas and Liu, 2017). Well-known micro-level theories such as social control by Hirschi (1969) or the Sutherland theory of social learning (1974) have traditionally placed a strong stress on family and peers and highlighted the fundamental roles they play in shaping individual social behaviors (Mowen and Boman, 2020).

The emotional bonding shared by family members is defined as family cohesion (Rivera et al., 2008). Emotional bonding is the core component of family functioning and is characterized by emotional engagement, high emotional support, and dependence (Deng et al., 2022). In a cohesive family, family members can be emotionally connected, provide support, and have positive communication patterns. Family cohesion extremely influences emotional interactions between parent and

adolescent (Rivera et al., 2008). This family emotional bonding and family cohesion have proved to be affected by the influence of information and communication technologies (ICTs) (Carvalho et al., 2015). Empirical evidence suggests mixed effects on the relationship between the frequency of use of new technologies and family cohesion. Parents perceive ICTs as facilitating family closeness and improving communication quality, while high-frequency usage reduces family time and intimacy, leading to isolation (Williams and Merten, 2011). Mesch (2003) found that the frequency of Internet use by young people lowers the perception of relational quality with parents. The type of online activity also plays a role, with educational purposes increasing adolescent-parent relationships, while entertainment purposes may raise intergenerational conflicts. Overall, the relationship between technology and family cohesion is complex and multifaceted.

Domestication of ICTs indicates a two-way interaction through which family members transform the meaning and influence of technology; hence, those technologies are changing culture and family relations (Blinn-Pike, 2009). Based on this theory, Livingstone proposes two independent categories of analysis: pragmatic analysis, which evaluates the purchase possibilities and position of ICTs at home, and symbolic analysis, which is translated by the demands as well as the rules of their users (Livingstone, 2007).

Hertlein (2012) proposes a multitheoretical model based on the domestication of ICTs theory to understand how ICTs influence family functioning. This model integrates three theories: family ecology, structural-functional, and interaction-constructionist. This conceptual multitheoretical model presents the best appropriate framework for examining how family media consumption influences family functioning as a system. The family ecology perspective examines how environmental variables affect families; the structural-functional perspective focuses on how families are organized to meet their needs; and the interaction-constructionist perspective focuses on how family members develop relationships, communicate, and manage rituals. This framework provides a valuable tool for analyzing and understanding media use in family life. This model is comprised of a series of complementary interdependencies between ecological influences (e.g., anonymity, accessibility), structural changes (e.g., reconsideration of regulations, duties, and boundaries), and process changes (e.g., transformation of intimacy, interpersonal interaction, and ritual disruption) (Carvalho et al., 2015). The uses and gratifications theory, based on the structural-functionalist systems approach, offers a complementary explanation for ICT's effects. It suggests that ICT choices are made to fulfill personal and contextual needs, respond to perceived problems, and motivate, leading to different patterns of effects on individuals and families (Coyne et al., 2013).

Social media, as ICT software, have both direct and indirect effects on individuals' family relationships (He, 2022). Although they have facilitated communication by making it easier and faster, there is evidence suggesting that social media have negatively impacted family bonds, exacerbated the generation gap, and caused communication barriers between parents and children. A balanced approach to social media consumption can help expand one's social network, but it may also diminish the quality and intimacy of familial connections (Oji et al., 2013). As mentioned previously, there are different theories that document the interrelation between the

usage of modern communication media and the type of communication a person has with his family, friends, etc. These theories suggest that new media can shape people's perceptions of family communication, provide new communication patterns, and influence the dynamics of expressing opinions within families. According to the research's objectives, the theoretical framework is developed based on Wellman's theories and Hirschi's social control theory.

Hirschi may not have addressed social media, but his Social Control Theory can shed insight on social media users' activities. Hirschi's perspective on family relationships posits that an individual's level of delinquency is inversely related to their degree of interest and investment in their family and social circles. In other words, a stronger connection to family and friends is associated with a lower likelihood of delinquent behavior. Attachment, belief, commitment, and engagement are the four components of Hirschi's theory of social control that impose boundaries and social mores in the minds of young adults (Hirschi, 2015). According to Ariel and Avidar's research, social media may generate real-world difficulties since it disrupts the regular patterns of social bonding that are central to Hirschi's idea (Ariel and Avidar, 2015). Based on their research, social media's emotional support system may weaken key social relationships, which can elevate, alienate, and enrage users. Hirschi's theory components, notably attachment, belief, and commitment, are effected by excessive social media usage and lead to deviant habits and attitudes among excessive social media users (Ford, 2017). It means that the duration of using social media has influenced family relationships. In this way, the more the Internet and cyberspace are used, leading to dependency on them, the more family relationships weaken. According to Hirschi, the more a user becomes dependent on the Internet and new media, the less opportunity he has to spend with his family, and this may cause diminishing family importance for the Internet user and lead to fewer family relationships (Ford, 2017).

In addition, the digitalization process and extensive internet usage can blur the lines between home and work environments. People tend to bring their work home, prioritizing specific tasks over interactions with family and other recreational activities. Weaknesses in communication and connection within families can lead to an increased tendency to utilize online spaces more frequently. As per Hirschi, the decline and fragility of familial bonds contribute to social harm. In online participatory environments, such as social media, individuals can effortlessly express their needs, emotions, and thoughts, fostering an atmosphere of dialogue and discussion. This interaction gives rise to new ideas and perspectives (Hashemi, 2001). The open expression of emotions in these digital spaces has created intimate relationships among users, who invest their emotional energy in these online environments. Hirschi's attachment theory posits that the relationships established through conversations contribute to the development of social bonds and foster empathy between the participants. It is likely that the substitution of these online relationships for familial connections diminishes the value of familial intimacy (Faramarziani et al., 2016). Consequently, while social media serves a significant function for social engagements, the inherent limitations of online connections in comparison to in-person interactions may ultimately result in a heightened sense of loneliness among users (Hampton and Wellman, 2003).

Social media encourage the development of weak network connections, which can transform into complementary support systems and relationships. These connections supplement, rather than replace, face-to-face interactions (Hampton and Wellman, 2003). On the contrary, due to the simultaneous reduction of deeper interactions outside the network, they restrict people's horizons and intellectual perspectives (Bastani and Raisi, 2010). In accordance with Wellman's theory, the level of support obtained on social media platforms, coupled with social media dependency, significantly impacts family communication and bonding. As individuals receive increased support through digital channels, their reliance on these technologies' increases (Bastani and Raisi, 2010). As per Wellman, the connections between network members are both an opportunity and a limitation, as these patterns affect people's access to resources such as information, wealth, and power. Wellman posits that the social system is a network of interdependent relationships in which individuals do not have equal access to scarce resources. Consequently, when explaining behavior, social researchers should consider the distribution of opportunities, or the unequal access to resources like information, wealth, and influence (Shareh pour, 2016). In Wellman's view, it is not social network density that leads to support but rather the ties and connectedness within the network; that is, the type of communication and connections between members of a social network provide support among its members. Internet connections rarely foster deep friendships, effective emotional support, or the provision of tangible assistance. From this perspective, engaging with social media not only reduces time spent on other activities but also diverts individuals' attention from their surroundings. As the use of social media increases, real-life social interactions outside the Internet decrease.

In essence, the digitalization process and heightened internet usage have the potential to obscure boundaries and diminish face-to-face communication. This phenomenon, in turn, exposes vulnerabilities in familial communication and connection, which may contribute to an increased propensity for utilizing digital platforms. As per Hirschi's assertions, the erosion and attenuation of family ties result in social harm, and the scarcity of genuine social relationships propels individuals towards engaging more in the cyber realm. Moreover, the growing dependence on social media and the subsequent strengthening of these online connections can lead to a weakening of familial bonds and a deterioration in parent-adolescent relationships (Omidvar and Saremi, 2002).

4. Methodology

The research methodology adopted for this study is quantitative, with a focus on utilizing a survey as the primary data collection method. The research instrument employed in this study is a questionnaire that was meticulously crafted by the research team in partnership with subject matter experts. This questionnaire serves as a structured tool designed to gather numerical data and facilitate statistical analysis to address the research objectives effectively. Collaborating with experts in the field ensured that the questionnaire was methodologically sound, relevant to the research context, and capable of capturing the necessary information accurately. The development of the questionnaire involved a systematic process to guarantee its

validity, reliability, and alignment with the study's objectives, ultimately enhancing the credibility and robustness of the research findings.

For this purpose, after the initial design, we provided a questionnaire to expert professors in this field, and the questions were reviewed and modified, and their points of view were included in the final questionnaire. Following this, a pre-test was conducted with 35 social media users to further refine the questionnaire. The results of the pre-test demonstrated an acceptable level of internal consistency, as evidenced by a Cronbach's alpha rate above 70%, as shown in **Table 1**. This rate indicates that the questionnaire is reliable and suitable for data collection, providing confidence in the validity and accuracy of the research findings.

Table 1. Cronbach's alpha.

Variable	Number of Item	Alpha
Social media usage rate	1	0.78
Support received from social media	14	0.88
Dependency on social media	9	0.821
Familial Bonds	14	0.81

Following the assessment of the Cronbach's alpha rate, which was found to be above 70%, the reliability and validity of the questionnaire were confirmed. Additionally, the validity of the final questionnaire was established through the approval of expert professors in the field, thereby ensuring its appropriateness and relevance to the research context. The validity of the indicators was based on their formal validity, which refers to the extent to which the questionnaire measures what it is intended to measure. This was achieved through a rigorous process of item development, review, and refinement, ensuring that the questionnaire accurately captured the constructs of interest and provided valid data for analysis. Overall, the combination of a high Cronbach's alpha rate, expert approval, and formal validity provides confidence in the quality and validity of the questionnaire and the resulting research findings.

The questionnaire is structured into three distinct sections, each serving a specific purpose. The first section focuses on demographic question aimed at capturing information about the participant's age. The second section is dedicated to the measurement of the dependent variable, which in this study is family bonds. To measure family bonds, based on Hirschi's theory, the existing literature and inspired by Elson's (1999) hybrid model, Razavieh and Samani (2001) made a family cohesion questionnaire that has 28 questions that are used to evaluate 8 factors and each factor is measured with a number of questions. These questions are designed as a Likert scale. The validity of this questionnaire's item and factors has been well evaluated and confirmed during many researches in this field. Furthermore, Samani (2003) reported an alpha coefficient of 0.90 and a reliability of 0.79 for the entire scale. Therefore, in the present research, the items that were determined and measured in the aforementioned questionnaire with two factors of family relationships and Intimacy degree between family members were justified and used to measure family bonds. The familial bond is evaluated through 14 items such as comfort levels, interpersonal

closeness, and parents' capacity to empathize with their children and maintain reciprocal relationships. Moreover, it encompasses the emotional support that family members provide to one another. The third and final section of the questionnaire is centered on the measurement of the independent variable, which in this study is the social media consumption style. This section includes three sub-sections, of questions designed to assess the participants' social media consumption with overall 24 items. The assessment of social media consumption patterns has been measured based on three crucial aspects: the extent of usage with one Item, the level of dependence with 9 items considering Young (2009) internet addiction questionnaire, and the support obtained from social media with 14 items (encompassing informational, emotional, and conversational assistance according to). Additionally, an open-ended question is included to inquire about the primary purpose of using social networking platforms.

The statistical population under investigation encompasses Iranian social media users within the age range of 13 to 18 during the year 2023. In the present study, the Cochran sample size determination formula was utilized, given its suitability for infinite populations. According to Cochran's formula, this population size is estimated to be 384 individuals.

The sampling methodology utilized in this study employed a targeted approach, specifically utilizing online non-probability (voluntary) sampling. The data collection process involved the distribution of an internet-based questionnaire through various channels on a specific student's education platform called "shad," tailored for Iranian students. The questionnaire was carefully curated to adhere to specific entry criteria, requiring the participation of social media users aged between 13 and 18. This method of sampling allowed for the selection of participants who met the predefined criteria, ensuring that the data collected was representative of the target population and suitable for the research objectives.

Ethical considerations: The condition of the participants' entry into the research project was their willingness and confidentiality of their personal information. To ensure the privacy and confidentiality of the respondents, several measures were taken in this study. Firstly, the questionnaires were designed to be anonymous, providing an additional layer of protection for the participants. Secondly, only the minimum necessary personal information was collected, which in this case was the respondents' age. This information was included in the questionnaire to ensure that the data collected was relevant to the research objectives while minimizing any potential invasion of privacy.

At the outset of the questionnaire, a clear statement about the research and the commitment to maintaining the confidentiality of the information provided was presented. This statement served to inform the participants about the purpose of the study and the steps taken to protect their personal information. By providing this information upfront, the participants could make an informed decision about their participation and feel confident that their privacy would be respected throughout the research process.

The data analysis was conducted using the SPSS Statistics software.

5. Results and discussion

According to statistical findings, individuals spend an average of 3.56 h daily on social media, with a minimum of 1 hour and a maximum of 10 h. The primary reasons for using social media for most respondents (51.8%) are for entertainment, 27.1% communicate with individuals of the opposite sex, and 21.1% communicate with friends.

Among Iranian Gen Z individuals, as shown in **Table 2,** the average level of dependency on social media is quantified at 28.93, the average level of support received from these platforms is 43.80, and the average level of family bonding is measured at 43.92. As per the majority of Iranian Gen Z respondents, 59.4% experience high levels of users' dependency on social media, and 52.4% stated high levels of support received from social media. This means that a significant proportion of Iranian Gen Z social media users derive emotional support, guidance, and communication from these digital platforms, which may contribute to their sense of belonging and reliance on these tools. Also, 70.3% of Iranian Gen Z respondents have high levels of family bonding that are notably high and can be attributed to the strong cultural emphasis on family values within the Iranian context.

Table 2. Percentage distribution of research variables.

Variable	Mean	Mode	Std. deviation	Low	Average	High
Dependency on social media	28.93	28	5.5	2.1	38.5	59.4
Support received from social media	43.80	42	10.64	6.5	41.1	52.4
Family bonding	43.92	42	4.55	0	29.7	70.3

Hypothesis 1: Given the results of the Pearson correlation analysis with a significance level of 0.000 *sig* and a correlation coefficient of −0.602, there exists a substantial correlation between social media usage and the maintenance of familial bonds as shown in **Table 3**. Consequently, an increase in social media usage among the study's participants is associated with a decline in the strength of familial bonds and connections. This outcome aligns with the growing concern that social media may be replacing face-to-face interactions, leading to a weaker sense of familial bonding.

Hypothesis 2: Based on the results of the Pearson correlation test with a significance level of *sig* = 0.000 and a correlation coefficient of −0.444, there exists a significant relationship between the extent of Dependency on social media and familial bonding. This finding suggests that as social media dependence among the participants increases, the strength of familial bonding tends to decrease. This result emphasizes the potential negative impact of excessive social media usage on family relationships.

Hypothesis 3: Taking into account the outcomes of the Pearson correlation analysis, which holds a significance level of 0.000 (*sig*) and a correlation coefficient of −0.495, there exists a substantial relationship between the amount of support derived from social media and familial bonding as shown in **Table 3**. This finding suggests that as the level of support obtained from social media platforms among participants escalates, the degree of familial bonds experiences a decrease. Research has revealed that individuals who openly express their emotional needs and share them on social media platforms tend to engage in less emotionally expressive

communication with their families. As a result, this behavior contributes to a diminished perception of intimacy and overall family interaction.

Table 3. Pearson's correlation between social media consumption style and family bonding.

Variable		Family relationships	Intimacy degree between family members	Familial bonds
Social media usage rate	R	−0.252	−0.565	−0.602
	Sig	0.000	0.000	0.000
Dependency on social media	R	−0.124	−0.445	−0.444
	Sig	0.000	0.000	0.000
Support received from social media	R	−0.234	−0.452	−0.495
	Sig	0.000	0.000	0.000
Sample size	-	384	384	384

Discussion

The results suggest that the progress and incorporation of communication technology into the daily lives of Iranians foster new communication dynamics within a digital citizenship landscape for Iranian Generation Z, potentially restructuring existing family and relationship models (Nik Bakhsh, 2018). Despite the benefits and convenience these advancements have offered their users (Bhadra and Kumar, 2023; Polanco-Levicán and Salvo-Garrido, 2022), this study demonstrates that they also influence the form and patterns of communication among Generation Z (Bala, 2014). The findings emphasize that social media interactions among this generation impact various aspects of social life, sometimes diminishing and altering the quality of offline relationships (Ahmadnia, 2016). In line with the aim of this study, which was to explore how digital native social media consumption affects family bonds, the results reveal that social media has undeniably transformed the way Iranian Generation Z communicates and interacts with their families. This transformation has introduced both positive and negative consequences, raising concerns about high dependency on social media, obtaining most emotional support and conversation through social media, and the negative correlation between social media use and family bonds.

The study's findings are significant in the context of understanding the digital behavior of this generation of Iranians, specifically their social media usage patterns. The average daily time spent on social media (3.56 hours) is higher than the global average of 151 minutes per day in 2022 (Statista, 2023). This result aligns with the You et al. (2023) study, which categorizes over two hours of social media usage as heavy consumption and classifies Iranian digital natives as heavy users of social media. This highlights the prevalence of social media consumption among Iranian digital natives. In the future study, comparing Iranian digital natives' social media usage with other countries contributes to providing a regional perspective on social media usage, which is crucial for understanding cultural and contextual differences in digital behavior. The primary purpose of Iranian digital natives' social media usage being entertainment is an interesting observation, which may differ from other cultures where information sharing or networking could be the main driver (Kahraman et al., 2020). This highlights that there is a tendency towards passive use, with a focus on entertainment rather than utility. However, the 48.2% of users engaging with social

media for communication purposes, including interaction with friends and the opposite sex, emphasizes that social media can be a valuable tool for fostering connections and communication among Iranian digital natives, particularly with the opposite sex, in a culture where face-to-face interactions with the opposite sex might be more traditionally restricted. Consequently, it is crucial to examine the factors contributing to this level of engagement, and it would be valuable to explore the potential implications of heavy social media usage on the psychological and emotional well-being of Iranian digital natives.

This study suggests that 70.3% of Iranian digital natives exhibit strong familial bonds, which can be linked to the cultural significance of family within Iranian society. This finding is noteworthy as it highlights the influential role of family in the lives of Iranian digital natives, often perceived to be more influenced by the digital world. To fully appreciate the scope of these findings, it is crucial to consider their broader implications for Iranian society as a whole. The strong familial bonds among Iranian digital natives may have positive effects on social cohesion and community building, contributing to the resilience and stability of the nation. As the digital world rapidly evolves, maintaining strong familial connections may serve as a stabilizing force, fostering a sense of belonging and identity among Iranian digital natives. However, it is imperative to examine any potential limitations or challenges that may arise from this cultural emphasis on family, such as the suppression of individual autonomy or the perpetuation of traditional gender roles. In a society where family values hold significant importance, individuals might feel constrained in their decision-making processes, leading to a lack of personal growth and self-expression. This could potentially hinder the development of a more progressive and diverse society.

The negative and significant correlation between social media use and family bonds ($r = -0.602$) is a cause for concern, as it indicates that as Iranian digital natives spend more time on social media, their familial connections tend to weaken. This observation supports previous research suggesting that excessive reliance on new communication technologies can lead to issues such as value discrepancies, generation gaps, and emotional detachment within families (Abbasi Shawazi and Abbasi Ateshgah, 2018; Adlipour et al., 2015; Ante-Contreras, 2016; Asghari and Kardan Moghadam, 2015; Nik Bakhsh, 2018). Sultana (2017) and Ngonidzashe (2016) emphasize that excessive social media usage among youth leads to reduced time spent with family members, leading to weakened family values. Furthermore, Nik Bakhsh (2018) highlights that excessive social media and mobile phone usage can result in heightened aggression, increased emotional detachment, decreased family ties, diminished trust in family members, compromised family privacy, and strained relationships. These findings are crucial, as they provide empirical evidence to support the notion that digital citizenship should be approached with caution, especially when it comes to balancing online presence with offline relationships.

Also, the results underscore that the majority of Iranian digital natives obtain emotional support and conversation through social media. It highlights the significant role of social media in the lives of Iranian digital natives, particularly in terms of emotional support and conversation. This result aligns with the growing trend of social media being a primary platform for interpersonal communication and emotional expression. However, the study also reveals a negative correlation ($r = -0.495$)

between the support received from social media and family bonds, suggesting that those who heavily rely on social media for support may experience strained relationships with their families. This observation is consistent with the findings of Asghari and Kardan Moghadam (2015), who argue that people who heavily rely on social media for support often share their difficulties in social media interactive environments, which can lead to privacy violations, public disclosure of personal issues, and strained family relationships. These findings may contribute to the development of targeted interventions and support systems that cater to the unique communication requirements of digital natives while preserving their family relationships.

Moreover, the research outcomes demonstrate the existence of a negative and significant correlation between family bonds and dependency on social media ($r = -0.444$) which indicate that overindulgence in social media usage, dependency, and attachment can result in a decline in familial connections and as mentioned by various scholars, poses a threat to family bonds. According to Hirschi and Wellman, excessive dependency on social media results in a sense of belonging to this digital space, which in turn reduces individual communication within the family and community. Hirschi also proposes that these weakening family bonds are the root cause of societal harm. Asghari and Kardan Moghadam (2015) research on high school students further supports these findings, revealing that internet addiction and mobile phone dependency contribute to weaker family ties and cold relationships. Students often seek emotional fulfillment in cyberspace, avoiding discussions with their families, making it difficult for parents to monitor and control their children's behavior. This virtual freedom can lead to norm-breaking, unhealthy relationships, reduced family cohesion, and negative impacts on students' physical and mental health, even academic failure. Considering these findings, it is crucial to emphasize the importance of digital citizenship education, focusing on maintaining a healthy balance between online and offline interactions, particularly within the context of family relationships. By promoting responsible and mindful social media engagement, we can mitigate the negative impact on familial connections and contribute to a stronger, more cohesive society.

6. Future research

This study contributes valuable insights into the complexities of digital citizenship among younger Generation Z, particularly Iranians, and underscores the significance of examining the evolving, intricate relationship between social media usage and familial bonds. In the forthcoming scholarly investigations, it is crucial to delve deeper into the intricate interplay between digital social network usage and family dynamics among digital natives for sustainable digital citizenship. This research underscores the significance of examining the long-term effects of social media on family bonds and societal health. Future studies should focus on the development of interventions and strategies to promote responsible social media usage, particularly in the context of family life for digital natives. A potential avenue of exploration could be the identification of effective methods to limit excessive social media consumption as well as preserving the value of familial bonds among digital

natives. This may involve research on the design and implementation of targeted educational programs or the development of innovative technologies that encourage moderation in social media use. Another area of interest could be the investigation of the role of digital literacy and responsible digital citizenship practices in fostering healthy family relationships, which can lead to the development of tailored interventions to foster healthy digital practices and fortify familial relationships in the age of pervasive social media influence. The implications of these findings transcend national boundaries, offering vital insights into comprehending the role of social media in shaping the digital citizenship landscape of younger generations worldwide. Moreover, future studies should focus on deciphering the motivations, consequences, and potential intervention strategies associated with social media consumption among Iranian digital natives. By doing so, we can contribute to the development of efficient strategies that promote responsible and healthy social media habits among digital natives, not only in Iran but also in other countries. Identifying the factors contributing to excessive social media usage can lead to the creation of effective prevention programs and provide guidelines for healthy social media consumption. Ultimately, this comprehensive understanding will contribute to the broader academic discourse on digital citizenship and its implications for the younger generation globally.

7. Conclusion and recommendations

In conclusion, the research highlights the role of social media in shaping family bonds among digital natives and determining the durability and health of the family and society. This correlation resonates with Hirschi's theory, which posits that social bonds, including familial ties, play a crucial role in mitigating delinquent behavior and fostering a healthy society. According to Khajeheian et al. (2020), the allure of social media, in conjunction with its accessibility and anonymity, has led to Iranian digital natives becoming voracious consumers. The findings presented on the strong inverse relationship between social media usage and family ties, with the highest influence attributed to the extent of social media engagement, should act as a call to action for society. Hirschi's theory further accentuates the detrimental effects of weakened family ties on delinquent behavior within this generation, posing potential challenges to communal well-being. This reinforces the idea that moderation in social media consumption is vital for maintaining strong family bonds that are essential for individual and communal well-being. Moreover, it highlights that balanced social media use can lead to expanded social networks, increased communication, and a sense of connectedness among geographically dispersed family members. However, excessive usage may result in dependence on virtual spaces, diminishing the value and importance of familial bonds, straining relationships among family members, and negatively affecting children's communication skills and the vulnerability of family members. According to Wellman's theory, excessive engagement with social media not only displaces time that could be spent on other activities but also redirects individuals' focus away from their immediate surroundings. As individuals devote more time to social media, face-to-face interactions and the strength of family bonds in real-life settings tend to diminish. Consequently, nurturing intimacy between family members and fortifying familial bonds is a crucial factor in safeguarding digital

natives from the detrimental effects of social media usage. Additionally, family bonding is an indispensable element of digital natives' lives, as our findings demonstrated, contributing to their overall well-being as well as that of their family and society at large. Intimacy between family member fosters opportunities for effective communication, shared experiences, and the development of robust relationships. By prioritizing family bonding time, families can reap the benefits of improved relationships, reduced stress, better academic performance, and improved mental health as suggested by Abbasi Shawazi and Abbasi Ateshgah (2018). Taking into account the aforementioned results, it is imperative for individuals to recognize the possible ramifications of excessive involvement in social media consumption. Digital citizenship education should emphasize the significance of preserving a harmonious equilibrium between online and offline communications, particularly in the context of familial dynamics. Through promoting responsible and thoughtful social media participation, we can alleviate the detrimental influence on familial bonds and contribute to a more unified, robust society. Furthermore, these results underscore the necessity of fostering digital literacy and responsible digital citizenship practices, enabling individuals to navigate the online realm while preserving the significance of face-to-face interactions and familial connections. Additionally, this highlights the need for a deeper comprehension of the influence of digital citizenship on our interpersonal relationships, particularly within the family unit. It is crucial for educators, parents, and individuals themselves to be aware of the potential negative consequences of excessive social media use on family relationships. By comprehending the effect of social media on family bonds and human relationships, policymakers, educators, and communities can develop strategies that promote responsible digital habits, foster healthy relationships, safeguard user privacy, and contribute to overall social, economic, and political progress. This may involve regulatory measures, guidelines for social media platforms, and public awareness campaigns that emphasize the importance of balanced digital habits and enhance digital citizens' comprehension of the potential consequences of excessive social media usage, ultimately fostering a more harmonious digital ecosystem.

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Appendix

Research questionnaire

Dear Participant,

We kindly invite you to take part in our online survey, which is an academic research project aimed at assessing the influence of social media on individual's family bonds aged 13 to 18 years. To ensure accurate results, we are seeking responses from social media users within this age range. Please read each question thoroughly and provide thoughtful answers. Your collaboration is essential for achieving the objectives of this study. We assure you that your privacy is of utmost importance and will be protected throughout the research process. We appreciate your participation and contribution to this valuable endeavor.

1-Age…………

2-How many hours do you spend on social media platforms daily?...............hour

3-What is the primary purpose of your usage of social networking platforms?

4-Kindly indicate your level of agreement with the following statement regarding your family relationship.

	Strongly agree	Agree	Neural	Disagree	Strongly disagree
I share high level of emotional closeness with my parents					
I discuss personal matters or share my feelings with my parents					
When it comes to expressing affection, I feel comfortable showing physical touch (e.g., hugging) with my parents					
When it comes to discussing sensitive topics (e.g., relationships, finances), I feel comfortable with my parents					
I consider my parents as my closest confidants					
In difficult situations, I feel that my parents understand and support me well					
When making decisions, I seek advice or input from my parents					
My parents and I engage in shared activities or hobbies together					
When it comes to family traditions and celebrations, I feel included and involved					
I am satisfied with the amount of quality time I spend with my parents					
I feel that my parents encourage and support my personal interests and hobbies					
In times of conflict or disagreement, I believe my parents handle the situation fairly and with respect for all parties involved					
I feel that my parents value and respect my opinions and input in family decisions					
I am comfortable discussing family matters (e.g., expectations, boundaries) with my parents					

5-Kindly indicate your level of agreement with the following statement regarding your reliance on social media:

	Strongly agree	Agree	Neural	Disagree	Strongly disagree
To have access to social media when I am feeling stressed or anxious is important for me					
I experienced feelings of anxiety or stress when not using social media for a while					
I felt the need to check social media constantly throughout the day					
Before doing anything, I check my social media accounts first					
When I use social media, I lose control of time and feel good					
Social media usage tends to consume a significant portion of my free time					
When I am feeling sad or down, I turn to social media to find companionship or comfort					
I rely on social media to maintain a sense of connection with others by sharing my interests and experiences					
Receiving likes and comments on my shared content provides me with a sense of validation					

6-Kindly indicate your level of agreement with the following statement regarding your perceived social connections and support:

	Strongly agree	Agree	Neural	Disagree	Strongly disagree
I use social media to find information related to my personal interests or hobbies					
Social media platforms help me stay updated with news and current events.					
People give the very good guidance to users by sharing their experiences and information in this space					
I use social media to receive positive feedback and encouragement from my social media connections					
when I share my personal problems or feelings on social media I receive supports to cope with my situations or emotions					
I had experienced to receive helpful advice, comfort, or emotional care from someone on a social media					
Social media helps me feel connected because anytime I wish there are someone listen to me					
In social media, I can easily say my pain and I realize that many people have the same problems and I am not alone					
Social media is one of my first choices to engage in communicate with my friends and family members					
to maintain regular conversations with my social media contacts is important for me					
I had experienced to formed new connections or strengthened existing relationships through conversations on social media platforms					
I feel significant level of support from my social media connections as they are always there to communicated with me					
I use social media to engaging in conversations with celebrities, public figures, and new people					
I find that social media conversations with my friends and family facilitate meaningful conversations and help me better understand their perspectives and feelings					