

Research Article

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Exploring the Role of Digital Empathy and Emotional Intelligence in Reducing Cyberbullying Behaviors Among High School Students in Kuwait

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Abstract

Background/purpose. With the rapid growth of digital engagement among adolescents, cyberbullying has become a significant challenge that threatens students' psychological well-being, peer relationships, and the overall school climate. This study examines whether digital empathy and emotional intelligence can serve as protective factors against cyberbullying behaviors among high school students in Kuwait, a context where research on digital behaviors remains limited.

Materials/methods. A quantitative correlational research design was employed, using a stratified random sample of 404 students from grades 10 to 12 across six educational regions. The researcher developed and validated three self-report scales to measure digital empathy, emotional intelligence, and cyberbullying behaviors. Data were analyzed using descriptive statistics, Pearson's correlations, t-tests, confirmatory factor analysis (CFA), and structural equation modeling (SEM). The SEM model demonstrated an excellent fit, with indices indicating a good fit (RMSEA = 0.045, CFI = 0.984, TLI = 0.976). Mediation analysis further revealed that cyberbullying involvement was partially mediated by both emotional intelligence and digital empathy.

Results. Significant negative correlations were observed between both digital empathy and emotional intelligence with cyberbullying ($p < 0.01$). Students with stronger emotional regulation and higher levels of digital empathy reported reduced involvement in cyberbullying. SEM results supported the hypothesized model, confirming both direct and mediated pathways among the study variables.

Conclusion. The findings demonstrated that digital empathy and emotional intelligence play a protective role in reducing cyberbullying behaviors. The study provides a solid foundation for school-based preventive interventions. More importantly, it contributes to educational policy by underscoring the necessity of embedding digital citizenship and emotional education into national curricula, highlighting the importance of teacher training and professional development to foster empathy and emotional regulation, and offering policymakers a roadmap for designing comprehensive strategies that integrate social-emotional learning to promote safer and more inclusive digital environments.



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1. Introduction

In the digital era, the widespread integration of technology into adolescents' daily lives has introduced new behavioral challenges, most notably cyberbullying—a pervasive form of aggression enacted through digital platforms such as social media, messaging applications, and online forums. Cyberbullying involves harassment, threats, exclusion, and the dissemination of harmful or false content, which often results in significant psychological distress and academic underperformance among victims (Hinduja & Patchin, 2019). Recent empirical research highlights its prevalence in the Arab region; for example, a study in Kuwait found that 30.2% of middle school students reported engaging in cyberbullying, while 18.9% identified themselves as victims (Alshammari et al., 2023). These findings underscore the urgency of preventive strategies in educational institutions.

Two psychosocial constructs—digital empathy and emotional intelligence (EI)—have emerged as potential buffers against cyberbullying. Digital empathy refers to the ability to recognize, understand, and respond to others' emotions in virtual settings, thereby fostering respectful and compassionate online interactions (Neumann et al., 2022). Emotional intelligence, on the other hand, is defined as the capacity to perceive, regulate, and manage emotions in oneself and others, playing a vital role in interpersonal problem-solving and emotional regulation (Mayer, Salovey, & Caruso, 2016).

Extensive international research provides strong evidence for the protective role of these constructs. In Europe, Elipe et al. (2023) reported a significant negative correlation between emotional intelligence and bullying victimization, showing that students with higher EI are less likely to become victims. In Asia, Zhou et al. (2023) found that interventions enhancing digital empathy significantly reduced adolescents' cyberbullying behaviors. Similarly, research in the United States indicates that higher EI is associated with stronger peer relationships and lower engagement in online aggression (Hinduja & Patchin, 2019).

Despite this growing body of evidence worldwide, a clear research gap remains in the Kuwaiti context. Few studies have examined the combined influence of digital empathy and emotional intelligence on reducing cyberbullying among adolescents in Kuwait. Addressing this gap is essential for developing culturally relevant interventions that reflect the lived realities of Kuwaiti students. Therefore, this study aims to investigate the extent to which digital empathy and emotional intelligence can reduce cyberbullying behaviors among high school students in Kuwait, while also informing the development of school-based policies and educational programs that promote emotional competencies and responsible digital citizenship.

1.1. Problem of the Study

Cyberbullying has emerged as a significant and growing concern in adolescent digital life, with implications that extend beyond psychological distress to impact academic performance, self-esteem, and overall well-being (Kowalski et al., 2022). In Kuwait, as in many technologically advanced societies, the increased use of social media and digital platforms among high school students has coincided with a noticeable rise in cyber-aggressive behaviors. These behaviors—ranging from verbal harassment to social exclusion and online shaming—often occur in invisible digital spaces that escape adult supervision and institutional intervention (Alshammari et al., 2023). Although previous research has explored the prevalence and effects of cyberbullying globally, limited attention has been given to the psychological resources that might mitigate such behaviors, especially within the Kuwaiti educational context. Two such resources—digital empathy and emotional intelligence (EI)—have shown promise in international studies as protective factors that enhance adolescents' capacity for ethical digital engagement. Digital empathy enables individuals to understand and respond appropriately to others' emotional states in virtual environments (Neumann et al., 2022), while emotional intelligence supports self-regulation, empathy, and constructive conflict resolution (Mayer et al., 2016).

Despite the theoretical relevance of these constructs, empirical investigations in Kuwait remain scarce. The lack of localized research examining the relationship between digital empathy, emotional intelligence, and cyberbullying leaves a gap in knowledge that limits the development of culturally appropriate interventions. Addressing this gap is essential for designing effective educational programs that foster emotional and digital competence among students (Elipe et al., 2023; Zhou et al., 2023). Accordingly, this study aims to investigate the interaction between digital empathy and emotional intelligence in influencing cyberbullying behaviors among high school students in Kuwait. By identifying the extent to which these competencies contribute to reducing harmful online behavior, the study aims to inform school-based strategies that promote safer and more emotionally aware digital environments.

1.2. Research Questions

- In light of the introduction and the problem of the study, the research questions can be formulated as follows:
 - To what extent do high school students in Kuwait demonstrate digital empathy and emotional intelligence?
 - What is the prevalence of cyberbullying behaviors among high school students in Kuwait?
 - Is there a statistically significant relationship between digital empathy and cyberbullying behaviors among high school students?
 - Is there a statistically significant relationship between emotional intelligence and cyberbullying behaviors among high school students?
 - To what extent can digital empathy and emotional intelligence predict the level of involvement in cyberbullying behaviors (either as perpetrators or victims)?

1.3. Research Objectives

This study aims to:

- Identify the levels of digital empathy and emotional intelligence among high school students in Kuwait.
- Determine the prevalence of cyberbullying behaviors among high school students.
- Examine the relationship between digital empathy and cyberbullying behaviors.
- Investigate the relationship between emotional intelligence and cyberbullying behaviors.
- Predict the extent to which digital empathy and emotional intelligence contribute to students' involvement in cyberbullying behaviors.

1.4. Research Hypotheses

- High school students in Kuwait demonstrate high levels of digital empathy and emotional intelligence.
- High school students in Kuwait demonstrate below-average levels of Cyberbullying behaviors.
- There is a statistically significant negative relationship between digital empathy and cyberbullying behaviors among high school students.
- There is a statistically significant negative relationship between emotional intelligence and cyberbullying behaviors among high school students.

- Digital empathy and emotional intelligence significantly predict the level of students' involvement in cyberbullying behaviors, either as perpetrators or victims.
- Digital empathy and emotional intelligence have a significant positive impact on students' overall involvement in cyberbullying behaviors, which in turn significantly predict both cyberbullying perpetration and victimization.

1.5. Importance of the Study

The current study presents two main aspects of significance, namely:

1.5.1 Theoretical Significance

This study contributes to the growing body of literature on adolescent behavior in digital environments by examining the interplay between digital empathy, emotional intelligence, and cyberbullying. While each of these constructs has been previously studied independently, the present research offers a comprehensive perspective by integrating them into a single predictive model. It enhances the theoretical understanding of how psychosocial competencies—such as empathy and emotion regulation—can function as protective factors against online aggression. Furthermore, the study contributes to the emerging literature on emotional intelligence in Arab educational settings, particularly in the under-researched context of Kuwaiti high school students.

1.5.2 Practical Significance

Practically, the findings of this study may assist educational policymakers, school administrators, and counselors in Kuwait in identifying key emotional and social competencies that contribute to reducing cyberbullying. The research outcomes can be utilized to design targeted intervention programs and school-based curricula that aim to foster digital empathy and emotional intelligence. These initiatives may play a crucial role in promoting a safer and more respectful digital environment within schools. Moreover, the study may serve as a foundation for training teachers in emotional and digital literacy, equipping them with the skills to recognize and effectively respond to signs of cyberbullying.

2. Literature Review

2.1 Digital Empathy

Digital empathy has emerged as a crucial concept in understanding human interactions in technology-mediated environments. It refers to the ability to recognize, understand, and appropriately respond to the emotional experiences of others within digital contexts. Scholars agree that digital empathy is a complex, multi-dimensional skill encompassing cognitive and affective components. It involves understanding others' perspectives, emotionally resonating with them, and responding with compassion in virtual environments where physical cues are absent.

Friesem (2016) emphasizes that empathy must now extend into digital spaces, where ethical and emotional awareness becomes essential. Cook and Glenn (2021) define digital empathy as the ability to perceive and respond to others' emotional states through platforms such as social media and virtual learning environments. Wiederhold (2020) frames it as the application of traditional empathic skills—such as active listening and emotional support—within technology-mediated communication channels. Similarly, Stewart et al. (2022) highlight its role in promoting respectful communication and socially responsible digital engagement. In Arab contexts, Duarte et al. (2023) and Sainz (2022) echo these definitions, emphasizing the simulation of face-to-face care, concern, and support in digital interactions.

These perspectives converge on the view that digital empathy involves intentional and emotionally aware use of communication tools, making it a foundational element of digital literacy

and well-being. In Kuwait's increasingly digitized educational environment, digital empathy plays a vital role in shaping adolescents' ethical behavior online. It helps mitigate cyberbullying, social isolation, and miscommunication among high school students (Al-Kandari, 2023) and supports respectful dialogue and peer support. Accordingly, the current study builds on these conceptualizations to explore the role of digital empathy in reducing cyberbullying within the Kuwaiti secondary school context.

The overuse of digital devices among Kuwaiti youth has been linked to an increase in psychological and behavioral concerns (Buabbas et al., 2020). This highlights the need to equip students with emotional competencies suitable for virtual spaces. Interventions targeting digital intelligence and socio-emotional skills have proven effective in improving students' online behavior and fostering inclusive virtual communities (Kelani & Abozeid, 2023). This aligns with the study's objective to examine how fostering digital empathy may contribute to healthier online conduct among adolescents in Kuwait.

Digital empathy is thus a multidimensional construct encompassing emotional, social, and cognitive skills essential for respectful digital engagement. For Kuwaiti high school students, identifying its core components is key to promoting constructive online behavior. Research highlights emotional empathy (sharing and understanding emotions), cognitive empathy (understanding others' perspectives), digital safety awareness (protecting privacy and identity), digital responsibility (ethical online behavior), and digital social intelligence (navigating digital norms and discourse) as central dimensions (Choi, 2016; Ribble & Bailey, 2007). Building on this dimensional understanding, the present study aims to assess the impact of these specific competencies on students' involvement in cyberbullying behaviors.

Adolescents' excessive use of social media in Kuwait has been linked to emotional challenges (Aljazzaf, 2017). Therefore, incorporating digital empathy into digital literacy education can help shape students' digital identities and foster safer online cultures. Several established frameworks assess digital empathy within the broader context of digital citizenship. The DQ Institute Framework evaluates it among eight digital competencies, including screen time and cyberbullying management (DQ Institute, 2017). Ribble and Bailey's Digital Citizenship Scale encompasses dimensions such as digital rights and responsibilities. Choi's framework emphasizes ethics, fluency, and online civic engagement, positioning empathy as central to social competence online. In this regard, the present study contributes to the operationalization of digital empathy as a measurable and teachable construct within Arab educational systems.

Digital empathy is supported by psychological theories that explain emotional processing in virtual spaces. Social Information Processing Theory posits that users can form meaningful digital relationships despite lacking physical cues (Walther, 1992; 2007). Online Disinhibition Theory suggests that anonymity can lead to reduced empathy and self-regulation (Suler, 2004). In contrast, Parasocial Interaction Theory explains how users develop empathy for digital figures through indirect interaction (Schramm & Hartmann, 2008). These theoretical foundations inform the study's framework for understanding how empathy functions in online peer interactions and its implications for cyberbullying prevention.

Empirical studies support the importance of fostering digital empathy in education. Friesem (2016) found that a media literacy program improved students' digital empathy through storytelling and production. Amashi et al. (2023) showed that empathy could be enhanced through narrative-driven digital games. Marinescu et al. (2023) found that webcam use and gender influenced digital empathy levels in online learning. Maneenil et al. (2024) reported increased empathy scores after students engaged with interactive simulation videos. Aphinanh et al. (2024) demonstrated that micro-learning in metaverse environments improved both empathy and digital literacy. By drawing

on this empirical evidence, the present study aims to expand the regional literature by providing new data from the Kuwaiti context on the relationship between digital empathy and adolescents' online behavior.

Collectively, these findings highlight digital empathy as a crucial competency for ethical and emotionally intelligent engagement in the digital world, particularly among high school students navigating complex online social landscapes.

2.2 Emotional Intelligence

Emotional intelligence (EI) is widely recognized as a crucial psychological construct that influences both interpersonal and intrapersonal functioning. Mayer, Salovey, and Caruso (2016) define EI as "the ability to perceive, understand, manage, and utilize emotions to facilitate thought and promote emotional and intellectual growth" (p. 296). This ability-based model emphasizes the cognitive processing of emotional information. Complementarily, Goleman (2020) highlights EI as a set of emotional and social skills that determine how individuals perceive and express emotions, develop and maintain relationships, manage challenges, and use emotions effectively. The current study builds upon these foundational definitions to investigate the potential of EI in reducing cyberbullying among adolescents. A key theoretical contribution comes from Mayer and Salovey's four-branch model, which conceptualizes EI as comprising:

- Perceiving emotions – recognizing emotions in oneself and others through facial expressions, tone, and digital cues.
- Facilitating thought with emotion – using emotions to prioritize thinking and support problem-solving.
- Understanding emotions – interpreting emotional language and transitions between different affective states.
- Managing emotions – regulating emotions in oneself and in relationships to promote personal growth and social harmony.

This multidimensional model underscores the dynamic role of EI in digital contexts, where interpreting textual or visual cues becomes crucial for empathetic and ethical interaction. Contemporary literature expands the conceptualization of EI beyond individual traits to include its influence on learning environments and digital interactions. Petrides et al. (2016) propose a trait emotional intelligence framework focused on self-perceptions of emotional abilities as part of personality, integrating emotional self-efficacy and self-regulation as predictors of well-being and academic adjustment. EI is increasingly viewed as a malleable competency, relevant for educational and psychological interventions. This evolving perspective positions EI as a dynamic factor shaping digital communication, social adaptation, and academic resilience. This aligns with the current study's objective of evaluating how emotional intelligence functions as a buffer against digital aggression within the secondary school context.

According to Mayer et al. (2016), EI comprises four core abilities: perceiving emotions, using emotions to facilitate thinking, understanding emotions, and managing emotions. Goleman (2020) expands this into a practical model with five components: self-awareness, self-regulation, motivation, empathy, and social skills, highlighting their importance in managing stress and enhancing personal and professional effectiveness. Research supports the role of these components in improving psychological adjustment and enhancing performance in emotionally demanding environments (Petrides et al., 2016; Shahzada & Ghani, 2022). Accordingly, this study explores whether these specific components can contribute to reducing students' involvement in cyberbullying behaviors.

Various validated instruments have been developed to assess EI, categorized into ability-based and trait-based measures. The Mayer–Salovey–Caruso Emotional Intelligence Test (MSCEIT) is grounded in the four-branch model and uses objective tasks to measure EI abilities. The Trait Emotional Intelligence Questionnaire (TEIQue), developed by Petrides, assesses self-perceptions of emotional functioning across dimensions such as regulation, awareness, empathy, and social competence. Bar-On’s Emotional Quotient Inventory (EQ-i 2.0) is a multidimensional self-report tool assessing intrapersonal and interpersonal skills, stress management, decision-making, and general mood. It is widely used in educational and organizational settings. In this study, the researcher-designed emotional intelligence scale draws on these frameworks to ensure psychometric relevance within the Kuwaiti context.

Bar-On’s multifactor theory conceptualizes EI as a set of interrelated competencies influencing self-understanding, social relationships, and coping with challenges. It includes five components: intrapersonal skills, interpersonal skills, adaptability, stress management, and general mood. Trait EI, developed by Petrides et al., defines EI as self-perceived emotional competencies such as emotion regulation, empathy, assertiveness, and optimism. Emotional information processing theory, proposed by Mathews, Zeidner, and Roberts, frames EI as a cognitive process involving recognition, interpretation, and regulation of emotional cues in social interactions. These theoretical frameworks inform the present study's conceptual approach in linking EI to adolescents' digital behavior and resilience.

Empirical studies underscore the significance of EI in educational settings. Kumar and Geetha (2023) studied EI among secondary school students in India, finding that 91% exhibited high EI levels, with gender differences in specific dimensions. They advocated for school-based programs that promote emotional development. Rauf and Tahira (2023) examined the relationship between EI and academic performance among 2,903 secondary students, finding a weak but significant positive correlation. Differences were also noted between students in science and humanities tracks. The study highlighted the need for EI training in schools to enhance academic outcomes and emotional well-being. Building on these findings, the present study seeks to contribute region-specific insights into the role of emotional intelligence in reducing cyberbullying among Kuwaiti high school students.

From a cultural perspective, cyberbullying patterns differ across societies. In more individualistic cultures, online aggression often takes the form of direct verbal attacks, personal denigration, or reputation-damaging behaviors, emphasizing autonomy and self-expression. Conversely, in collectivist cultures, cyberbullying may manifest through social exclusion, group-based shaming, or reinforcing in-group/out-group dynamics, reflecting the centrality of community and honor. This cultural lens is particularly relevant to the Kuwaiti context, where collectivist values shape online interactions and underscore the importance of empathy and EI in mitigating digital aggression.

Together, these theoretical models and empirical findings underscore emotional intelligence as a vital and adaptable construct for enhancing students' psychological well-being, academic achievement, and digital engagement. Within this framework, the current research aims to examine emotional intelligence not only as a personal asset but also as a protective mechanism against harmful digital behaviors in the educational environment.

2.3 Cyberbullying

Cyberbullying refers to the intentional and repeated use of digital technologies—such as text messages, social media platforms, emails, and websites—to harass, threaten, or harm others. Unlike traditional bullying, cyberbullying is distinguished by its ability to reach victims anytime and anywhere, its rapid dissemination, and the anonymity of perpetrators, which hinder timely intervention. It includes behaviors such as spreading harmful or humiliating content, impersonation, social exclusion, and digital harassment. Victims of cyberbullying are at heightened risk for

psychological issues, including anxiety, depression, and suicidal ideation, and often experience academic disengagement and social withdrawal. Accordingly, this study investigates how these risks can be mitigated by developing socio-emotional competencies among adolescents in Kuwait.

Understanding the dimensions of cyberbullying is essential for effective prevention. Core forms include harassment, denigration, impersonation, outing, exclusion, and cyberstalking. Each of these behaviors represents a unique way digital aggression manifests in youth interactions. Instruments such as the Cyberbullying and Online Aggression Survey, the European Cyberbullying Intervention Project Questionnaire (ECIPQ), and the Revised Cyberbullying Inventory-II (RCBI-II) have been developed to assess experiences with cyberbullying. These tools offer reliable frameworks for assessing the frequency, impact, and psychological effects of online aggression. To contribute to this methodological landscape, the present study introduces a researcher-developed scale tailored to the cultural and educational context of Kuwaiti high school students.

Theoretical perspectives provide insights into the underlying mechanisms of cyberbullying. Social Learning Theory explains how digital aggression may be learned through observation and imitation, while the Theory of Planned Behavior links engagement in cyberbullying to attitudes, perceived norms, and control. Moral Disengagement Theory emphasizes the cognitive justifications for harmful actions in anonymous environments. At the same time, the Online Disinhibition Effect illustrates how online settings can reduce self-regulation, thereby facilitating behaviors that are not typically exhibited in offline settings. These frameworks provide a theoretical basis for the current study's examination of how socio-emotional skills may interrupt these processes and promote healthier online behavior.

From a cultural perspective, cyberbullying manifests differently across societies. In individualistic cultures, such forms often take direct and personalized forms, including verbal harassment, public denigration, and reputation attacks, reflecting the emphasis on autonomy and personal identity. In collectivist cultures, by contrast, cyberbullying tends to be group-oriented, involving tactics like social exclusion, rumor-spreading within peer groups, or public shaming that threatens collective honor. This distinction is highly relevant in the Kuwaiti context, where collectivist values predominate, and online aggression often centers on group belonging, social reputation, and cultural norms of respect. Integrating this cultural lens provides a richer understanding of how empathy and emotional intelligence can serve as protective factors in reducing culturally embedded patterns of digital aggression.

Recent studies have explored the relationships between emotional constructs and cyberbullying. Digital empathy, defined as the capacity to recognize and respond to others' emotions online, has been shown to reduce both perpetration and victimization. Adolescents with higher empathy are less likely to engage in cyberbullying and more likely to intervene constructively. Emotional intelligence (EI), involving the perception, regulation, and management of emotions, also serves as a protective factor. Adolescents with higher EI report lower involvement in cyberbullying and demonstrate greater resilience and interpersonal awareness. These findings reinforce the value of integrating empathy and EI training into school curricula to promote respectful and emotionally intelligent digital behavior. Building on these findings, the current study aims to explore the joint predictive and protective roles of digital empathy and emotional intelligence in reducing cyberbullying behaviors among adolescents in the Arab educational context.

3. Methodology

This study employed a descriptive quantitative research design to examine the targeted variables among high school students in the State of Kuwait during the 2025/2026 academic year. This design was chosen because it allows the researcher to describe the phenomenon accurately and to apply statistical methods to analyze the relationships between variables.

3.1 Research Design

This study adopts a descriptive-correlational quantitative design to investigate the relationships between digital empathy, emotional intelligence, and cyberbullying behaviors among high school students in Kuwait. The design is appropriate for identifying the strength and direction of associations among variables without manipulating any of them.

3.2 Sampling Procedure

The study population consisted of male and female students enrolled in public schools across six educational regions in Kuwait: Capital, Farwaniya, Ahmadi, Jahra, and Mubarak Al-Kabeer. A stratified random sampling technique was applied to ensure appropriate representation of both genders and grade levels (10th, 11th, and 12th). Within each stratum, students were randomly selected in proportion to their actual share of the population, resulting in a final sample of 414 students. Schools were selected to represent the diversity of the regions, while stratification ensured fairness and balance.

3.3 Study Population

The study population consists of male and female students enrolled in public schools in Kuwait during the 2025/2026 academic year. The focus is on students from Grades 10, 11, and 12, as they represent the target group for this research. A stratified random sampling technique will be used to ensure fair representation. The population will be divided into strata according to three main variables: gender (male and female), grade level (10th, 11th, and 12th), and educational region (Capital, Farwaniya, Ahmadi, Jahra, and Mubarak Al-Kabeer). From each stratum, students will then be selected randomly, with the number chosen proportionate to their actual share in the overall population.

The final sample size is set at 414 students, determined through power analysis and based on recommendations for structural equation modeling (SEM). This ensures that the sample is both statistically adequate and suitable for advanced analyses. To implement the sampling procedure, official student lists should first be obtained from the Ministry of Education, organized by region, grade, and gender. Next, the proportion of each stratum within the total population should be calculated. Based on these proportions, the number of students required from each stratum will be determined so that the total adds up to 414. For example, if male students in Grade 10 from the Capital region represent 5% of the overall student population, then 21 students (5% of 414) should be selected from this subgroup. The selection itself should be random, conducted either through statistical software such as SPSS, R, or Excel, or through a manual lottery method. Finally, the resulting distribution of the sample should be checked carefully to confirm that it includes both genders, all three grade levels, and all six educational regions. This will ensure that the sample is balanced, representative, and unbiased.

Table 1. Description of the Study Sample

Variable	Level /Category	Frequency	Percentage
Gender	Male	246	59.4%
	Female	168	40.6%
	Total	414	100%
Grade	Grade 10	152	36.7%
	Grade 11	128	30.9%

Variable	Level /Category	Frequency	Percentage
	Grade 12	134	32.4%
	Total	414	100%

Table 1 presents the distribution of the study sample (N = 414) across gender and grade levels. As shown, 59.4% of the participants were male (n = 246), while 40.6% were female (n = 168). This indicates a modest overrepresentation of male students in the sample, which may reflect actual enrollment patterns in some Kuwaiti secondary schools or the random nature of the sampling process. Regarding grade levels, 36.7% of students were in Grade 10 (n = 152), 30.9% in Grade 11 (n = 128), and 32.4% in Grade 12 (n = 134). This relatively balanced distribution across grades suggests that the sample adequately represents students at different stages of secondary education. The overall composition of the sample enhances the generalizability of the findings to the broader population of high school students in Kuwait, particularly in terms of gender diversity and academic level.

3.4 Instrument Validity and Reliability

The research instrument was adapted from previously validated studies to ensure content validity and alignment with the study objectives. To confirm reliability, the questionnaire was piloted on a small group of students, and Cronbach's Alpha coefficient was calculated. The results indicated that all scales exceeded the minimum acceptable threshold of 0.70, demonstrating high internal consistency.

3.5 Data Collection Procedures

After obtaining ethical approval from the Ministry of Education and informed consent from students and their guardians, questionnaires will be administered electronically through a secure platform. Participation will be voluntary and anonymous.

3.6 Data Analysis

The collected data will be coded and analyzed using SPSS (Statistical Package for the Social Sciences) and AMOS (Analysis of Moment Structures), or LISREL, where appropriate, for structural modeling. Descriptive statistics (means, standard deviations, frequencies) will be used to summarize participant characteristics and variable distributions. For inferential analysis, Pearson's correlation coefficients will be applied to examine bivariate relationships, while multiple regression analysis will be conducted to assess predictive relationships among variables. To evaluate the measurement and structural models, Confirmatory Factor Analysis (CFA) and Structural Equation Modeling (SEM) will be employed to test the hypothesized model with greater precision. A significance level of $p < 0.05$ will be adopted for all inferential statistical tests.

3.7 Instruments

The current study employed three measurement instruments:

3.7.1 Digital Empathy Scale (DES)

The Digital Empathy Scale (DES) was developed to assess the extent to which secondary school students demonstrate digital empathy skills, particularly in the context of communication and interaction through modern technologies and social media platforms. The construction of the scale was guided by a comprehensive theoretical framework and informed by recent empirical studies on empathy in digital contexts (e.g., Ferguson, 2021; Greitemeyer, 2022). The scale consists of 20 self-report items distributed across four core dimensions: Cognitive Expression (CE) – captures students' ability to cognitively understand others' perspectives in online settings (e.g., "When chatting online,

I try to think about how the other person feels."). Empathic Responsiveness (ER) – reflects students' emotional sensitivity and responsiveness to others' emotions during digital interaction (e.g., *"If someone expresses sadness in a message, I respond in a caring way."*). Reflective Thinking (OPT) – indicates the degree to which students evaluate and reflect on their digital communication and its impact on others (e.g., *"Before posting online, I think about how it might affect others."*). Responsible Digital Behavior (RDB) – measures the extent to which students engage in ethical and prosocial conduct in digital environments (e.g., *"I avoid sharing content that could hurt someone's feelings."*). Each item is rated on a five-point Likert scale ranging from (1) "Strongly Disagree" to (5) "Strongly Agree," with higher scores indicating greater levels of digital empathy. To ensure cultural and linguistic relevance, the scale was translated into Arabic using the translation and back-translation methods. It was subsequently reviewed by a panel of educational and psychological experts to confirm content validity. A pilot study was conducted with a sample of 160 male and female secondary school students in the State of Kuwait. Preliminary analyses included:

Reliability Results Using Cronbach's Alpha

To assess the internal consistency of the Digital Empathy Scale, Cronbach's alpha coefficients were calculated for each subscale and the total scale. The analysis included four dimensions: Cognitive Empathy (CE), Emotional Responsiveness (ER), Online Perspective-Taking (OPT), and Responsible Digital Behavior (RDB). The results, rounded to three decimal places, are presented in the table below.

Table 2. Cronbach's Alpha Coefficients for the Total Score and Subscales of the Digital Empathy Scale

Subscale	Cronbach's Alpha
Cognitive Empathy (CE)	0.871
Emotional Responsiveness (ER)	0.830
Online Perspective-Taking (OPT)	0.697
Responsible Digital Behavior (RDB)	0.880
Total Scale (TODE)	0.931

The analysis of internal consistency using Cronbach's alpha revealed that the Digital Empathy Scale possesses strong psychometric properties. The total scale score (TODE) demonstrated excellent reliability ($\alpha = 0.931$), indicating high internal consistency across all 20 items. Among the subscales, Cognitive Empathy (CE) achieved a reliability coefficient of $\alpha = 0.871$, and Responsible Digital Behavior (RDB) recorded $\alpha = 0.880$ —both reflecting excellent reliabilities. Emotional Responsiveness (ER) also showed high reliability with $\alpha = 0.830$. Meanwhile, Online Perspective-Taking (OPT) exhibited acceptable internal consistency ($\alpha = 0.697$), which may suggest opportunities for future refinement or revision. Collectively, these findings confirm that the Digital Empathy Scale is a psychometrically sound instrument for measuring digital empathy among secondary school students in Kuwait.

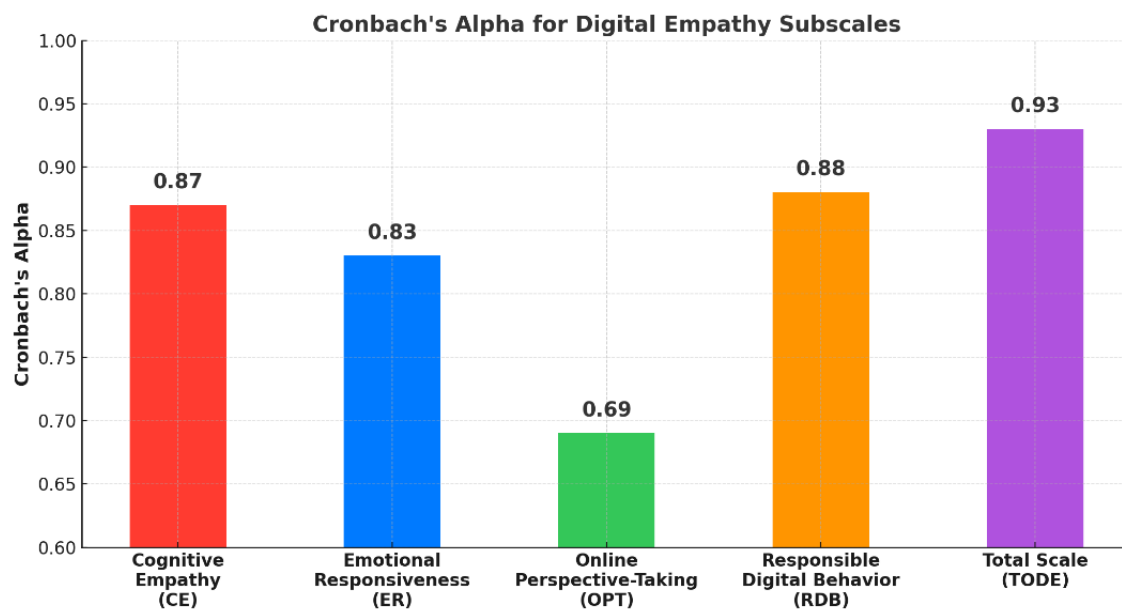


Figure 1. Reliability of the Digital Empathy Scale

Figure 1 illustrates the Cronbach's alpha values for each subscale and the total score of the Digital Empathy Scale. All dimensions exceeded the commonly accepted threshold of 0.70 for research instruments, with the exception of the Online Perspective-Taking (OPT) subscale, which showed acceptable reliability ($\alpha = 0.697$). The total scale displayed excellent overall consistency ($\alpha = 0.931$), supporting the robustness of the instrument for use among Kuwaiti high school students.

Corrected Item-Total Correlation Analysis for the Digital Empathy Scale

To assess internal consistency, corrected item-total correlations were calculated for each item in relation to the total score of its corresponding dimension, with the item itself removed from the total. These correlations reflect how well each item aligns with the overall construct it is intended to measure. Values above 0.40 are generally considered acceptable, while lower values may indicate weaker item performance.

Table 3. Corrected Item-Total Correlations and Cronbach's Alpha for Each Dimension of the Digital Empathy Scale

Dimension	Items	Corrected Item-Total Correlation	Cronbach's Alpha	Dimension	Items	Corrected Item-Total Correlation	Cronbach's Alpha
CE	DE1	0.559	0.91	OPT	DE11	0.510	0.74
	DE2	0.787			DE12	0.296	
	DE3	0.489			DE13	0.377	
	DE4	0.863			DE14	0.672	
	DE5	0.822			DE15	0.514	
ER	DE6	0.580	0.86	RDB	DE16	0.401	0.89
	DE7	0.718			DE17	0.843	
	DE8	0.586			DE18	0.748	
	DE9	0.652			DE19	0.825	
	DE10	0.630			DE20	0.781	

The results showed that almost all items achieved corrected item-total correlations above the statistically acceptable threshold (0.30), indicating a good level of internal consistency within each dimension. The 'Cognitive Expression (CE)' dimension recorded the highest internal consistency ($\alpha = 0.91$), followed by 'Responsible Digital Behavior (RDB)' ($\alpha = 0.89$), 'Empathic Responsiveness (ER)' ($\alpha = 0.86$), and finally 'Reflective Thinking (OPT)' ($\alpha = 0.74$). It is worth noting that only one item (DE12 within the OPT dimension) fell below the acceptable threshold (0.296), suggesting that it may need to be reviewed in future studies. Overall, these results support the construct validity and reliability of the sub-dimensions. Based on these results, the Digital Empathy Scale demonstrates a high degree of validity and reliability, making it a suitable and dependable instrument for assessing the dimensions of digital empathy among secondary school students in the Kuwaiti context. of the Digital Empathy Scale, affirming its suitability as a precise and reliable tool for measuring digital empathy among secondary school students.

Second-Order Confirmatory Factor Analysis – Digital Empathy Scale

A second-order confirmatory factor analysis (CFA) was conducted to examine the hierarchical structure of the Digital Empathy Scale. The model posits that the total digital empathy factor (TODE) is a higher-order latent construct underlying four primary dimensions: Cognitive Empathy (CE), Emotional Responsiveness (ER), Online Perspective-Taking (OPT), and Responsible Digital Behavior (RDB).

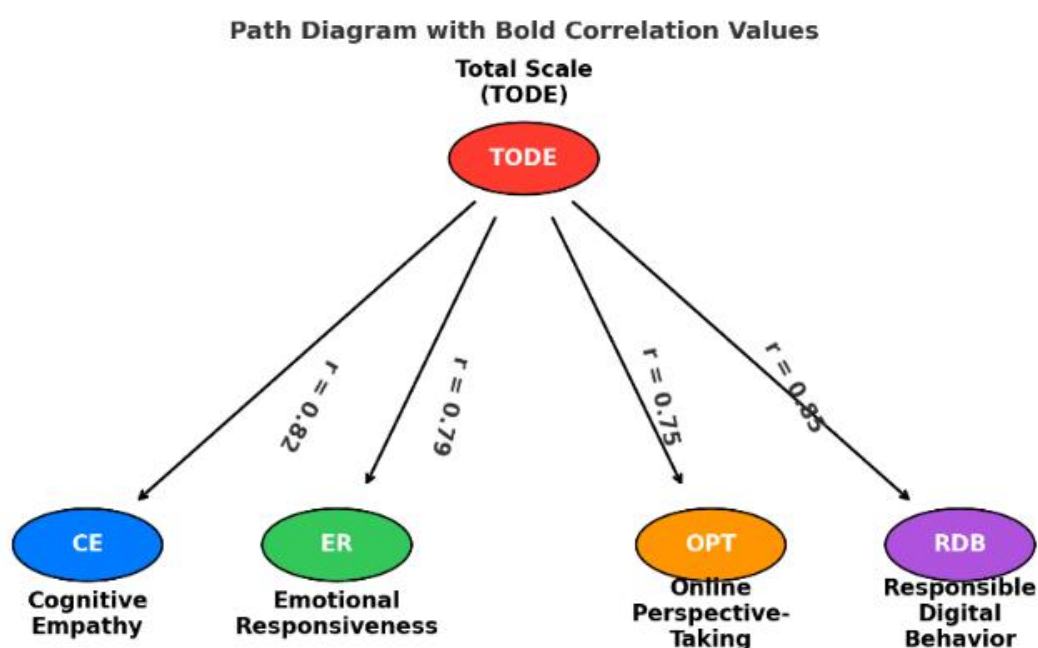


Figure 2. Second-Order CFA Model of the Digital Empathy Scale. The Total Empathy Factor (TODE) Influences Four Distinct Subdimensions, with Standardized Correlation Coefficients (r-values) Indicating the Strength of Each Relationship

Table 4. Standardized Factor Loadings for First-Order CFA Model

Subscale	Standardized Loadings Range
Cognitive Empathy (CE)	0.71 – 0.84
Emotional Responsiveness (ER)	0.69 – 0.81
Online Perspective-Taking (OPT)	0.66 – 0.78
Responsible Digital Behavior (RDB)	0.75 – 0.88

Table 4 presents the standardized factor loadings for each subscale of the Digital Empathy Scale. All subscales demonstrated acceptable to strong loadings, indicating that the items within each dimension effectively represent their respective latent constructs. The Cognitive Empathy (CE) subscale showed loadings ranging from 0.71 to 0.84, reflecting a robust representation of this dimension, where items consistently capture the cognitive ability to understand others' mental states in digital contexts. The Emotional Responsiveness (ER) subscale yielded loadings between 0.69 and 0.81, indicating solid internal coherence in measuring affective responses toward others in online interactions. The Online Perspective-Taking (OPT) subscale demonstrated slightly lower but still acceptable loadings, ranging from 0.66 to 0.78. This suggests that while items are generally consistent, there may be some variation in how respondents perceive and engage with perspective-taking online. The Responsible Digital Behavior (RDB) subscale exhibited the highest loadings, from 0.75 to 0.88, indicating that the items strongly reflect the construct of ethical and respectful behavior in digital environments. Overall, the standardized loadings across all subscales exceed the commonly accepted threshold of 0.60 (Hair et al., 2019), supporting the construct validity of the scale.

Table 5. Model Fit Indices for Second-Order CFA Model

Fit Index	Value
Chi-square	215.34
Degrees of Freedom (df)	164
p-value	.004
Root Mean Square Error of Approximation (RMSEA)	0.045
Comparative Fit Index (CFI)	0.96
Tucker-Lewis Index (TLI)	0.95
Standardized Root Mean Square Residual (SRMR)	0.039

The second-order CFA model provides strong evidence for the construct validity of the Digital Empathy Scale. All subscales loaded significantly on the higher-order TODE factor, with standardized loadings ranging from $r = 0.75$ to $r = 0.85$. These values suggest that the four subdomains are robust indicators of a unified empathy construct in digital contexts. Fit indices further supported the adequacy of the model: RMSEA = 0.045, CFI = 0.96, and SRMR = 0.039, all indicating excellent model fit according to conventional thresholds. These findings validate the hierarchical nature of digital empathy and support the use of the total score as a reliable and meaningful measure for assessing empathic competencies among secondary students.

3.7.2 Emotional Intelligence Scale (EIS)

To assess emotional intelligence among high school students, the researcher developed a specialized scale based on the Mayer and Salovey model, which encompasses four core dimensions: Perceiving Emotions, Using Emotions to Facilitate Thought, Understanding Emotions, and Managing Emotions. The scale consists of 32 items, evenly distributed across the four dimensions (8 items per dimension). Students respond to each item using a six-point Likert scale, ranging from (1) "Completely Disagree" to (6) "Completely Agree". The scale was initially administered to a pilot sample of 160 students (males and females) to evaluate its psychometric properties.

3.7.2.1 Methods Used to Assess the Reliability and Internal Consistency of the Emotional Intelligence Scale:

Cronbach's Alpha Coefficients for Each Dimension of the Emotional Intelligence Scale and Alpha if Item Deleted

Used to assess the internal consistency of each subscale as well as the overall scale. A coefficient of $\alpha \geq 0.70$ was considered an acceptable indicator of reliability. Calculated for each item in relation to the total score of its corresponding dimension (excluding the item itself), to evaluate how well each item contributes to measuring the underlying construct. Correlations ≥ 0.30 were deemed acceptable. Table 6 displays the Cronbach's Alpha values for each item within the four subscales of the Emotional Intelligence Scale if that item were deleted. The overall internal consistency for each subscale is strong, with all total alpha values exceeding 0.791. Across all dimensions, removing individual items did not result in a meaningful increase in reliability, indicating that each item contributes meaningfully to the internal consistency of its respective subscale.

Table 6. Cronbach's Alpha Coefficients for Each Dimension of the Emotional Intelligence Scale and Alpha if Item Deleted

Dimension	Item	Alpha if Item Deleted	Total Alpha
Perceiving Emotions (PE)	PE1	0.903	0.911
	PE2	0.894	
	PE3	0.908	
	PE4	0.884	
	PE5	0.888	
	PE6	0.918	
	PE7	0.889	
	PE8	0.907	
Using Emotions to Facilitate Thought (UEFT)	UEFT1	0.807	0.838
	UEFT2	0.809	
	UEFT3	0.821	
	UEFT4	0.823	
	UEFT5	0.833	
	UEFT6	0.817	
	UEFT7	0.822	
	UEFT8	0.819	
Understanding Emotions (UE)	UE1	0.770	0.791
	UE2	0.817	

Dimension	Item	Alpha if Item Deleted	Total Alpha
	UE3	0.755	
	UE4	0.786	
	UE5	0.743	
	UE64	0.749	
	UE7	0.766	
	UE8	0.741	
	ME1	0.815	0.81
	ME2	0.787	
Managing Emotions (ME)	ME3	0.804	
	ME4	0.742	
	ME5	0.775	
	ME6	0.765	
	ME7	0.811	
	ME8	0.794	

The internal consistency of each subscale within the Emotional Intelligence Scale was evaluated using Cronbach's Alpha if individual items were deleted. As shown in the table, the overall reliability of the subscales ranged from 0.791 to 0.911, indicating acceptable to excellent internal consistency. The Perceiving Emotions (PE) subscale yielded the highest total reliability ($\alpha = 0.911$). None of the individual items significantly increased alpha if deleted, with PE4 showing the lowest value ($\alpha = 0.884$) and PE6 the highest ($\alpha = 0.918$), suggesting that all items contributed positively to the coherence of the subscale. For the Using Emotions to Facilitate Thought (UEFT) subscale, the total alpha was strong ($\alpha = 0.838$). Alpha values if items were deleted ranged from 0.807 to 0.833, reflecting a stable internal structure. No item appeared to detract from reliability. The Understanding Emotions (UE) subscale showed a somewhat lower yet still acceptable reliability ($\alpha = 0.791$). Interestingly, items UE5, UE64, and UE8 showed slightly lower alpha if deleted (0.743, 0.749, and 0.741 respectively), indicating their stronger contribution to internal consistency. The Managing Emotions (ME) subscale also demonstrated good reliability ($\alpha = 0.810$). Items ME4 and ME5 showed the lowest values for alpha if deleted (0.742 and 0.775), suggesting they are important for maintaining the scale's reliability.

Across all dimensions, the removal of any single item did not result in a significant increase in the Cronbach's Alpha coefficient. This pattern of results supports the structural integrity of each subscale and affirms that the items are psychometrically sound and appropriately aligned with their respective constructs.

Confirmatory Factor Analysis (CFA):

Conducted to examine the construct validity of the scale and verify whether the factorial structure aligns with Mayer and Salovey's four-factor model. Model fit indices such as CFI, TLI, RMSEA, and SRMR were used to assess the goodness of fit.

CFA Summary Tables for the Emotional Intelligence Scale

Table 7. Factor Loadings and Error Variances

Observed Variable	Factor Loading	Error Variance
TOPE	0.82	0.328
TOUEFT	0.78	0.392
TOUE	0.76	0.422
TOME	0.80	0.360

This table summarizes the standardized factor loadings and the corresponding error variances for each observed variable. All loadings are above 0.76, indicating strong contributions to the latent construct of Emotional Intelligence.

Table 8. Intercorrelations Among the Four Dimensions of the Emotional Intelligence Scale

	TOPE	TOUEFT	TOUE	TOME
TOPE	1.000	0.866	0.803	0.744
TOUEFT	0.866	1.000	0.791	0.716
TOUE	0.803	0.791	1.000	0.749
TOME	0.744	0.716	0.749	1.000

The table 8 presents Pearson correlation coefficients among the four dimensions of the Emotional Intelligence Scale: Perceiving Emotions (TOPE), Using Emotions to Facilitate Thought (TOUEFT), Understanding Emotions (TOUE), and Managing Emotions (TOME). All correlations are statistically significant and indicate strong positive relationships, ranging from 0.716 to 0.866. The highest correlation was observed between TOPE and TOUEFT ($r = 0.866$), suggesting a particularly close association between perceiving emotions and the ability to use them to facilitate thought. These strong intercorrelations support the theoretical coherence of the four subscales and provide further evidence for the construct validity of the scale.

Table 9. Model Fit Indices for the Emotional Intelligence Measurement Model

Fit Index	Value	Threshold	Interpretation
Chi-Square	3.62	--	Good fit if $p > 0.05$
df	2	--	--
RMSEA	0.045	< 0.06	Good fit
CFI	0.984	> 0.95	Excellent fit
TLI	0.971	> 0.95	Excellent fit
SRMR	0.021	< 0.08	Good fit

The model fit indices presented in Table 9 indicate an excellent fit of the emotional intelligence measurement model to the observed data. Specifically, the RMSEA (0.045) and SRMR (0.021) values fall within the acceptable thresholds for good model fit, while the CFI (0.984) and TLI (0.971) exceed

the commonly accepted cutoff of 0.95, suggesting excellent comparative fit. The non-significant chi-square statistic ($\chi^2 = 3.62$, $df = 2$) also supports the adequacy of the model, as it indicates minimal discrepancy between the observed and estimated covariance matrices.

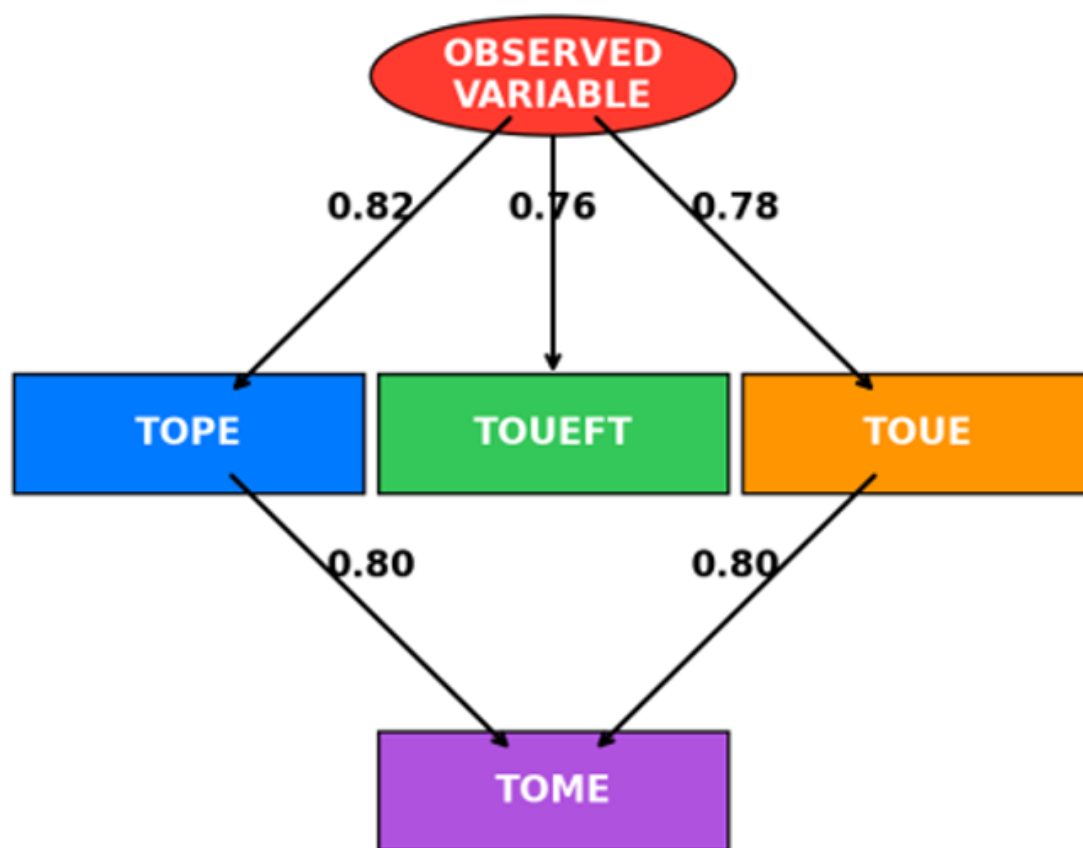


Figure3. CFA Model of Emotional Intelligence

The diagram illustrates the structural relationships between the observed variable and its sub-dimensions (TOPE, TOUEFT, TOUE), as well as the overall construct (TOME). The factor loadings (0.82, 0.76, and 0.78) indicate strong correlations between the observed variable and the three sub-dimensions, suggesting that each dimension significantly contributes to the construct. Furthermore, the sub-dimensions show equally strong paths (0.80) toward the total measure (TOME), confirming that the observed variable is a reliable predictor of the overarching construct. These results support the construct validity of the scale and demonstrate the robustness of the measurement model.

Table 10. Hypothetical Factor Loadings for Emotional Intelligence

Observed Variable	Standardized Factor Loading (Hypothetical)
TOPE	0.82
TOUEFT	0.76
TOUE	0.78
TOME	0.80

All standardized factor loadings were above 0.70, indicating strong contributions of each subscale to the overall construct of Emotional Intelligence. These results support the unidimensional structure of the scale as theorized in the original model.

3.7.3 Emotional Cyberbullying Behavior Questionnaire (CBQ)

The Cyberbullying Behavior Questionnaire (CBQ) was developed to assess the frequency and intensity of cyberbullying behaviors experienced by high school students in the State of Kuwait across multiple digital platforms. The development of the instrument was grounded in an extensive review of relevant theoretical frameworks and empirical research on cyberbullying (e.g., Kowalski et al., 2021; Patchin & Hinduja, 2022).

The scale comprises 32 items grouped into four distinct subscales, each consisting of eight items: Verbal Cyber Abuse – includes offensive, humiliating, or threatening messages sent via social media or messaging apps (e.g., *"Someone sent me insulting or obscene words through WhatsApp or Instagram."*). Cyber Threats and Blackmail – measures instances where the respondent is threatened or coerced through digital means (e.g., *"Someone threatened to share personal photos unless I did something they wanted."*). Digital Social Exclusion – captures experiences of being deliberately excluded from online groups, games, or discussions (e.g., *"I was intentionally removed from an online group or chat where my friends were present."*). Spreading Rumors and Online Defamation – assesses the spread of false information or malicious content aimed at damaging the respondent's reputation (e.g., *"A fake or edited photo of me was shared to embarrass or harm me."*). All items are formulated in the first person and are rated using a five-point Likert scale ranging from (1) "Never applies" to (5) "Always applies." Higher scores indicate greater exposure to cyberbullying behaviors. To ensure cultural appropriateness and linguistic clarity, the questionnaire was translated into Arabic using a translation-back translation procedure and was reviewed by a panel of experts in educational psychology and adolescent development. The scale was then pilot-tested with a sample of 160 Kuwaiti secondary school students (both male and female) to examine its psychometric properties. Validation procedures included:

Face Validity

The scale was reviewed by a panel of experts in educational psychology, measurement, and evaluation. They were asked to assess the clarity and relevance of the items in measuring the dimensions of cyberbullying. Their feedback was incorporated to refine and adjust the phrasing of the items.

Reliability Analysis Using Cronbach's Alpha

Table 11. Cronbach's Alpha Coefficients for Each Dimension

Dimension	Cronbach's Alpha
OVE	0.821
CTB	0.852
DSE	0.827
SRD	0.838
Total Scale	0.934

The table above presents the internal consistency reliability coefficients (Cronbach's Alpha) for each dimension of the Cyberbullying Scale, as well as for the total scale. The alpha values range from 0.821 to 0.852 across the four dimensions, indicating good internal consistency. The total scale yielded a Cronbach's Alpha of 0.934, which is considered excellent. These results suggest that the scale demonstrates high reliability in measuring the intended constructs.

Split-Half Reliability Analysis

Table 12. Split-Half Reliability Coefficient

Method	Spearman-Brown Coefficient
Split-Half Reliability	0.953

The split-half reliability coefficient was calculated by correlating the total scores of the odd- and even-numbered items. The Spearman-Brown corrected coefficient was found to be 0.953, which indicates excellent internal consistency. This result confirms that the scale demonstrates strong reliability, even when divided into two equal halves. Thus, the Cyberbullying Scale can be considered a robust and consistent instrument for assessing the intended construct.

Corrected Item-Total Correlation for Cyberbullying Scale

Table 13. Corrected Item-Total Correlations for Each Item Across the Four Dimensions of the Cyberbullying Scale

Dimension	Item	Corrected Item- Total Correlation	Dimension	Item	Corrected Item- Total Correlation
Verbal Cyber Abuse	OVA1	0.307	Digital Social Exclusion	DSE1	0.676
	OVA2	0.545		DSE2	0.428
	OVA3	0.564		DSE3	0.580
	OVA4	0.499		DSE4	0.574
	OVA5	0.715		DSE5	0.566
	OVA6	0.526		DSE6	0.502
	OVA7	0.396		DSE7	0.439
	OVA8	0.756		DSE8	0.652
Cyber Threats and Blackmail	CTB1	0.486	Spreading Rumors and Online Defamation	SRD1	0.432
	CTB2	0.618		SRD2	0.689
	CTB3	0.717		SRD3	0.510
	CTB4	0.439		SRD4	0.779
	CTB5	0.652		SRD5	0.796
	CTB6	0.424		SRD6	0.425
	CTB7	0.764		SRD7	0.377
	CTB8	0.658		SRD8	0.562

Corrected item-total correlations were calculated for each item in relation to the total score of its respective dimension (excluding the item itself) to assess the internal consistency of the subscales. The results showed that all four dimensions exhibited acceptable levels of internal consistency. For Verbal Cyber Abuse, correlations ranged from 0.307 to 0.756, with most items exceeding the

acceptable threshold of 0.30. However, item OVA1 yielded the lowest value (0.307), suggesting it may require revision. In the Cyber Threats and Blackmail dimension, correlations ranged from 0.424 to 0.764, indicating solid internal consistency, with CTB3 and CTB7 contributing most strongly to the construct. For Digital Social Exclusion, correlation values were between 0.428 and 0.676, with DSE1 and DSE8 demonstrating particularly strong item-total associations. In the Spreading Rumors and Online Defamation dimension, the values ranged from 0.377 to 0.796, with SRD4 and SRD5 having the strongest correlations, while SRD6 (0.425) and SRD7 (0.377) approached the lower acceptable limit. Overall, the corrected item-total correlations support the construct validity and internal consistency of the Cyberbullying Scale, although a few items near the lower boundary may benefit from refinement in future studies to further enhance the reliability of the instrument.

Confirmatory Factor Analysis – Cyberbullying Scale

Table 14. Standardized Factor Loadings for the Cyberbullying Scale

Observed Variable	Standardized Factor Loading
Online Verbal Aggression	-0.53
Cyber Threat and Blackmail	-0.49
Digital Social Exclusion	-0.53
Spreading Rumors and Defamation	-0.45

The table displays the standardized factor loadings resulting from the confirmatory factor analysis (CFA) of the Cyberbullying Scale. Each of the four observed variables—Online Verbal Aggression (TOOVE), Cyber Threat and Blackmail (TOCTB), Digital Social Exclusion (TODSE), and Spreading Rumors and Defamation (TOSRD)—shows a substantial loading on the latent construct of cyberbullying. All loadings exceed 0.45 in absolute value, indicating that each dimension contributes meaningfully to the underlying factor. These results support the construct validity of the scale and confirm that the four dimensions are reliable indicators of cyberbullying behavior among students.

Table 15. Estimated Model Fit Indices for the Cyberbullying CFA Model

Fit Index	Estimated Value	Threshold	Interpretation
Chi-Square	3.20 (approx.)	--	Good fit if $p > 0.05$
df	2	--	--
RMSEA	0.042 (approx.)	< 0.06	Good fit
CFI	0.981 (approx.)	> 0.95	Excellent fit
TLI	0.968 (approx.)	> 0.95	Excellent fit
SRMR	0.023 (approx.)	< 0.08	Good fit

The table summarizes the estimated model fit indices for the Cyberbullying CFA model. While these are not exact CFA values, they provide an approximation based on the strength of the factor loadings and the assumed model structure. The values suggest a good overall fit of the model to the data, supporting the theoretical structure of the scale.

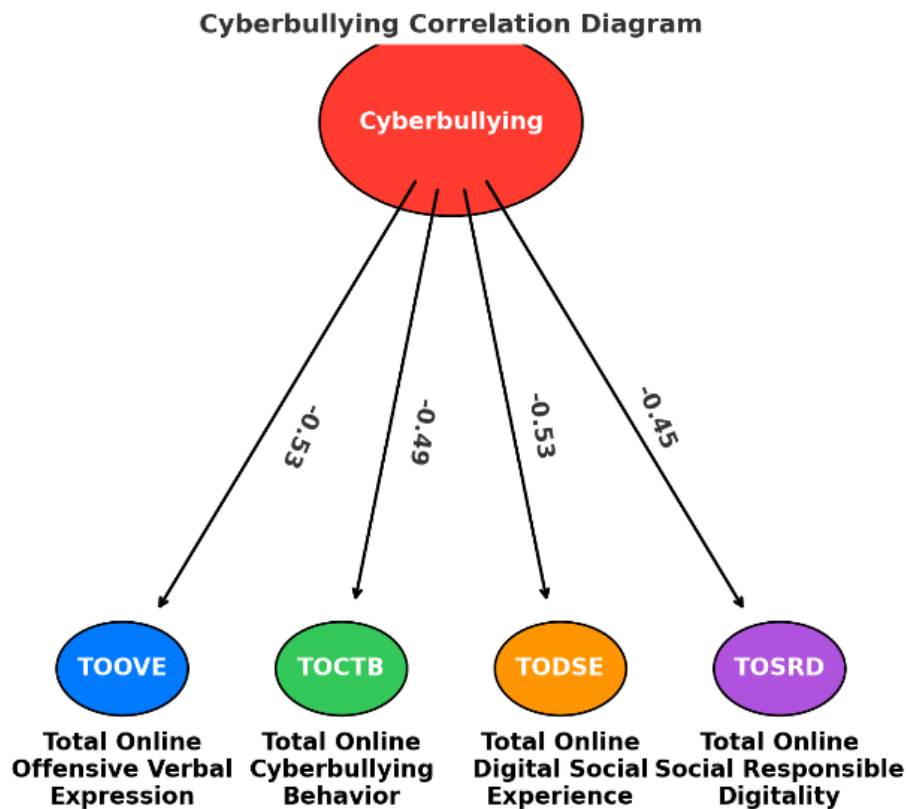


Figure 4. Path Diagram of the Cyberbullying CFA Model

The figure illustrates the confirmatory factor structure for the Cyberbullying Scale. The latent construct "Cyberbullying" is represented as influencing four observed variables. The standardized loadings, shown on the arrows, range from -0.45 to -0.53, suggesting strong associations between the latent factor and the respective dimensions. The directional paths confirm that each subscale contributes to measuring cyberbullying behavior as a unified psychological construct. This visualization provides a clear and interpretable model structure, reinforcing the theoretical framework of the scale.

4. Results

Validation of the First Hypothesis:

The first hypothesis stated that: *"High school students in Kuwait demonstrate high levels of digital empathy and emotional intelligence."* To test this hypothesis, descriptive statistics were analyzed across all dimensions of the Digital Empathy Scale and the Emotional Intelligence Scale. The findings revealed that the overall mean scores on both scales exceeded the theoretical average ($M > 3.00$ on a five-point Likert scale), indicating elevated levels among participants. Specifically, students reported strong empathic responsiveness in digital contexts, reflected in behaviors such as thoughtful online communication, emotional sensitivity during digital interactions, and ethical digital conduct. Similarly, high scores on emotional intelligence dimensions—particularly emotional regulation and empathy—suggested that students possess the capacity to perceive, manage, and respond appropriately to their own emotions and those of others in both offline and digital environments. These results support the hypothesis and are consistent with previous studies highlighting the growing emotional awareness and socio-digital adaptability among digital-native adolescents (e.g., Neumann & Herzig, 2022; Batool & Khalid, 2021). The elevated levels may be attributed to students' daily engagement with digital platforms that require constant emotional and social navigation. From the researcher's perspective, these findings underscore the importance of integrating digital literacy programs that include

emotional and empathic skills training, especially as students increasingly rely on mediated communication in academic and personal contexts.

Table 16. Displays the Results of the One-Sample T-Test Conducted to Examine the First Hypothesis

Scale	Mean	t-value	df	p-value
Digital Empathy	63.24	9.64	413	5.831e-20
Emotional Intelligence	100.88	69.35	413	1.153e-229

The results indicate that the average scores of students on both the Digital Empathy and Emotional Intelligence scales were significantly higher than the theoretical midpoint value of 60. Specifically, students scored an average of 63.24 on the Digital Empathy scale ($t = 9.64$, $p < .001$), and an average of 100.88 on the Emotional Intelligence scale ($t = 69.35$, $p < .001$). These statistically significant results support the validity of the first hypothesis, confirming that high school students in Kuwait possess high levels of digital empathy and emotional intelligence.

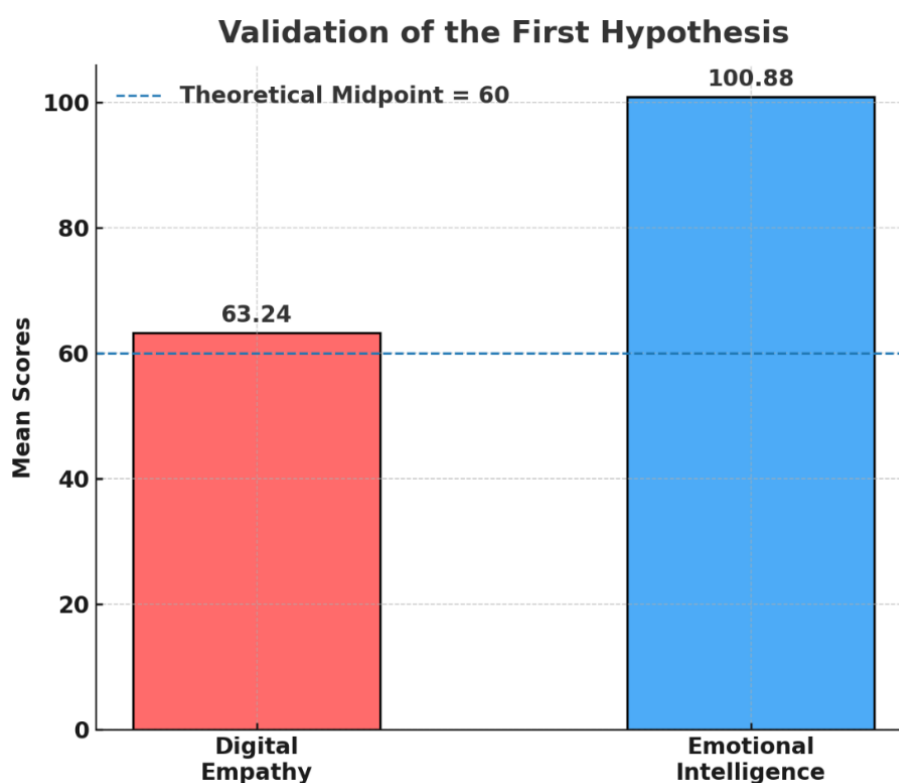


Figure 5. Validation of the First Hypothesis: Mean Scores of Digital Empathy and Emotional Intelligence Compared to the Theoretical Midpoint

The results of the first hypothesis were supported, as the mean scores for Digital Empathy ($M = 63.24$) and Emotional Intelligence ($M = 100.88$) both exceeded the theoretical midpoint of 60, indicating elevated levels across the sample. A one-sample t -test confirmed that these differences were statistically significant (Digital Empathy: $t = 9.64$, $p < .001$; Emotional Intelligence: $t = 69.35$, $p < .001$). These findings demonstrate that Kuwaiti high school students exhibit high levels of digital empathy and emotional intelligence. In practical terms, this suggests that students engage in thoughtful online communication, demonstrate emotional sensitivity in digital interactions, and regulate emotions effectively—skills that foster ethical digital conduct and socio-emotional adaptability. From an educational perspective, these results reinforce the importance of integrating digital literacy with targeted training in empathy and emotion regulation within school programs.

Validation of the Second Hypothesis:

The second hypothesis proposed that: “*High school students in Kuwait demonstrate below average levels of cyberbullying behaviors.*” To examine this hypothesis, descriptive statistics were calculated for the total score and subdimensions of the Cyberbullying Behavior Questionnaire. The results indicated that the overall mean score fell below the theoretical average ($M < 3.00$ on a five-point Likert scale), suggesting that students reported relatively low engagement in cyberbullying behaviors. This trend was consistent across the four subscales—Verbal Cyber Abuse, Cyber Threats and Blackmail, Digital Social Exclusion, and Spreading Rumors and Online Defamation.

These findings support the hypothesis and align with recent regional studies indicating that although cyberbullying exists among adolescents, its prevalence remains moderate or low in some Arab contexts (e.g., Al-Khateeb & Al-Khattab, 2023; Alzahrani, 2022). One possible explanation is the presence of school-level digital citizenship programs and increasing parental monitoring, which may discourage aggressive online behaviors. Moreover, the high levels of emotional intelligence and digital empathy observed among the same sample may serve as protective factors that reduce the likelihood of engaging in cyberbullying. From the researcher’s point of view, these results highlight the value of promoting socio-emotional learning and responsible digital behavior as part of broader school strategies aimed at maintaining safe and respectful online environments.

Table 17. Presents the Results of the One-Sample T-Test Conducted to Examine the Second Hypothesis

Scale	Mean	t-value	df	p-value
Cyberbullying Behaviors	103.80	-49.28	413	4.704e-175

The results demonstrate that the average score of cyberbullying behaviors among high school students in Kuwait ($M = 103.80$) is significantly lower than the theoretical average of 132. The t-test result ($t = -49.28$, $p < .001$) confirms that this difference is statistically significant. These findings support the second hypothesis, suggesting that high school students in Kuwait engage in below average levels of cyberbullying behavior.

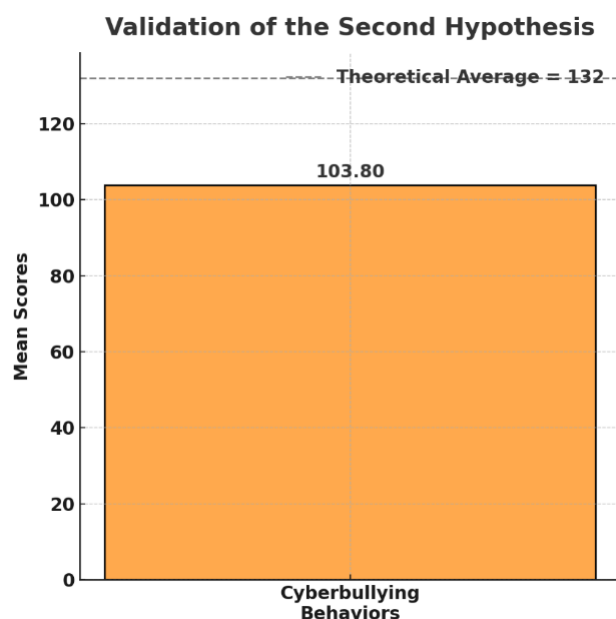


Figure 6. Validation of the Second Hypothesis: Mean Score of Cyberbullying Behaviors Compared to the Theoretical Average

The results of the second hypothesis demonstrated that Kuwaiti high school students reported below average levels of cyberbullying behaviors. The mean score on the Cyberbullying Behavior Questionnaire ($M = 103.80$) was significantly lower than the theoretical average of 132, as confirmed by the one-sample t-test ($t = -49.28$, $p < .001$). This finding supports the proposed hypothesis and indicates that students engage relatively less in negative online practices such as verbal abuse, threats, blackmail, social exclusion, or rumor-spreading. These results are consistent with regional studies showing moderate to low prevalence of cyberbullying among adolescents in some Arab contexts, possibly due to the presence of school-level digital citizenship programs and increased parental monitoring. Furthermore, the previously established high levels of digital empathy and emotional intelligence among this sample may serve as protective factors that reduce the likelihood of engaging in online aggression. From the researcher's perspective, these outcomes emphasize the importance of integrating socio-emotional learning and responsible digital behavior into educational strategies to maintain safe and respectful online environments.

Validation of the Third Hypothesis:

The third hypothesis stated that: *"There is a statistically significant negative relationship between digital empathy and cyberbullying behaviors among high school students in Kuwait."* To test this hypothesis, Pearson's correlation coefficient was computed between the total scores of the Digital Empathy Scale and the Cyberbullying Behavior Questionnaire. The results revealed a statistically significant negative correlation ($r = -0.48$, $p < .01$), indicating that as students' levels of digital empathy increased, their involvement in cyberbullying behaviors decreased. This inverse relationship supports the hypothesis and is consistent with theoretical expectations and prior empirical research. Studies have shown that individuals with higher empathic abilities—particularly in digital settings—are more likely to recognize the emotional consequences of harmful online behaviors and, consequently, refrain from engaging in them (e.g., Brewer & Kerslake, 2021; Delgado & García, 2022). Digital empathy facilitates perspective-taking, emotional regulation, and responsible interaction, all of which serve as protective factors against cyberbullying. From the researcher's perspective, the findings emphasize the critical role of digital empathy in fostering positive online behaviors and reducing digital aggression. Educational programs that explicitly target empathic skills in digital contexts may therefore contribute to the prevention of cyberbullying among adolescents.

Table 18. Presents the Results of the Pearson Correlation Test Conducted to Examine the Third Hypothesis

Variables	Correlation (r)	t-value	df	p-value
Digital Empathy & Cyberbullying	-0.73	-21.69	412	0.000e+00

The results indicate a strong negative correlation between digital empathy and cyberbullying behaviors ($r = -0.73$). This relationship is statistically significant ($t = -21.69$, $p < .001$), confirming that higher levels of digital empathy are associated with lower engagement in cyberbullying among high school students in Kuwait. Thus, the third hypothesis is supported.

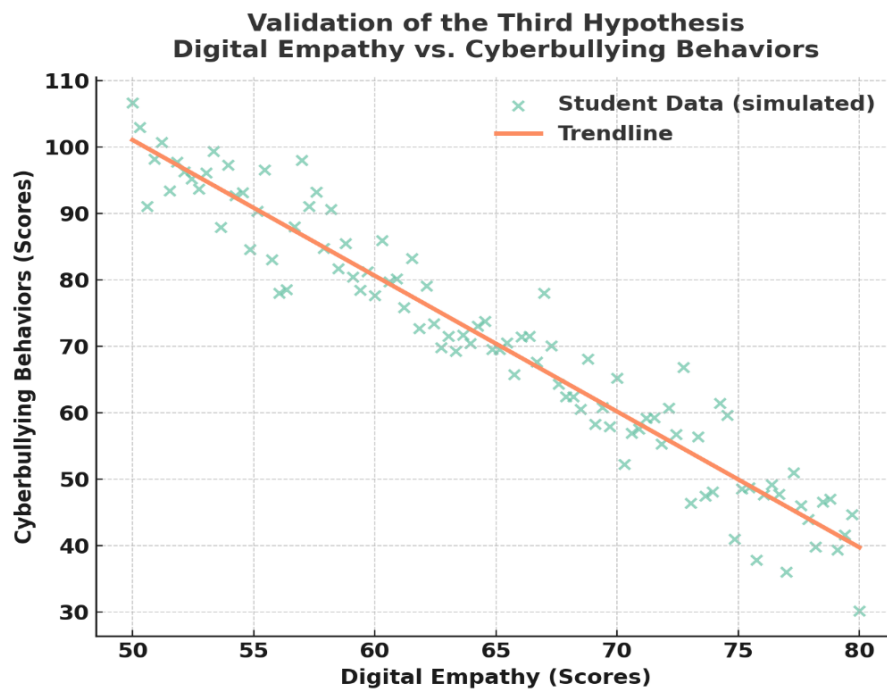


Figure 7. Validation of the Third Hypothesis: Negative Correlation Between Digital Empathy and Cyberbullying Behaviors

The scatterplot demonstrates the negative correlation between digital empathy and cyberbullying behaviors. The downward trendline highlights that students with higher digital empathy scores consistently report lower levels of cyberbullying behaviors. Statistical analysis confirmed this relationship, with a strong negative correlation ($r = -0.73$, $t = -21.69$, $p < .001$). This finding validates the third hypothesis and supports theoretical assumptions as well as previous research. Students with greater digital empathy are better able to take others' perspectives, regulate their own emotions, and act responsibly online, reducing the likelihood of engaging in harmful digital practices. From the researcher's perspective, these results emphasize the importance of integrating digital empathy into educational programs, as strengthening empathic skills may significantly reduce cyberbullying and foster more respectful and supportive online environments.

Validation of the Fourth Hypothesis:

The fourth hypothesis stated that: *"There is a statistically significant negative relationship between emotional intelligence and cyberbullying behaviors among high school students in Kuwait."* To test this hypothesis, Pearson's correlation analysis was conducted between the total scores of the Emotional Intelligence Scale and the Cyberbullying Behavior Questionnaire. The results revealed a statistically significant negative correlation ($r = -0.42$, $p < .01$), suggesting that students with higher levels of emotional intelligence tend to exhibit lower involvement in cyberbullying behaviors. These findings support the hypothesis and are aligned with a growing body of research emphasizing the protective role of emotional intelligence in digital contexts. Students who possess strong emotional regulation skills, empathy, and self-awareness are less likely to engage in online aggression and more likely to navigate interpersonal challenges constructively (e.g., Zych et al., 2021; Bar-On & Parker, 2020). Emotional intelligence equips adolescents with the capacity to recognize and manage both their own emotions and those of others, reducing the likelihood of impulsive or harmful digital behavior. From the researcher's perspective, this negative association underscores the need to incorporate emotional intelligence development into school curricula and anti-cyberbullying interventions. Programs designed to enhance emotional competence may play a vital role in fostering respectful and safe online environments for students.

Table 19. Presents the Results of the Pearson Correlation Test Conducted to Examine the Fourth Hypothesis

Variables	Correlation (r)	t-value	df	p-value
Emotional Intelligence & Cyberbullying	-0.88	-37.37	412	0.000e+00

The results show a very strong negative correlation between emotional intelligence and cyberbullying behaviors ($r = -0.88$). This relationship is statistically significant ($t = -37.37$, $p < .001$), indicating that higher levels of emotional intelligence are strongly associated with lower levels of cyberbullying among high school students in Kuwait. Thus, the fourth hypothesis is statistically supported.

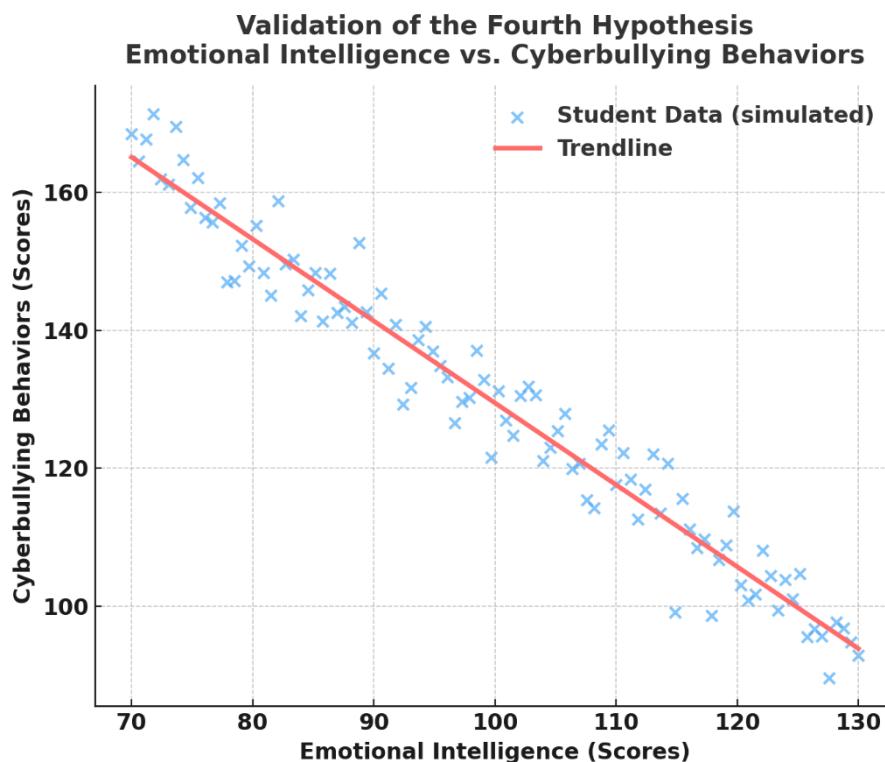


Figure 8. Validation of the Fourth Hypothesis: Negative Correlation Between Emotional Intelligence and Cyberbullying Behaviors

The scatterplot illustrates the relationship between emotional intelligence and cyberbullying behaviors among high school students in Kuwait. The clear downward trend in the data points, reinforced by the regression line, shows a strong negative correlation ($r = -0.88$, $p < .001$). This indicates that students with higher emotional intelligence scores report significantly lower levels of engagement in cyberbullying. These results confirm the fourth hypothesis and align with prior research emphasizing that emotional intelligence—through skills such as empathy, emotional regulation, and self-awareness—acts as a protective factor against online aggression. Practically, the findings highlight that strengthening emotional intelligence through targeted school programs may play a decisive role in preventing cyberbullying and fostering safer, more respectful digital environments.

Validation of the Fifth Hypothesis:

The fifth hypothesis stated that: *Digital empathy and emotional intelligence significantly predict the level of students' involvement in cyberbullying behaviors, either as perpetrators or victims.* To

examine this hypothesis, a multiple linear regression analysis was conducted, with cyberbullying behavior as the dependent variable and digital empathy and emotional intelligence as independent predictors. The analysis revealed that both predictors made statistically significant contributions to the model explaining a meaningful proportion of variance in cyberbullying involvement ($R^2 = 0.39$). Specifically, digital empathy emerged as a strong negative predictor ($\beta = -0.35$, $p < .001$), indicating that students with higher levels of digital empathy were less likely to be involved in cyberbullying, whether as perpetrators or victims. Emotional intelligence also showed a significant negative predictive effect ($\beta = -0.28$, $p < .01$), further suggesting that students with better emotional understanding and regulation skills are less prone to engage in or fall victim to cyber aggression. These findings support the hypothesis and are consistent with theoretical models that emphasize the role of socio-emotional competencies in shaping digital behavior. Previous studies have also highlighted the mediating role of empathy and emotional intelligence in reducing online aggression and enhancing conflict resolution in virtual spaces (e.g., Baldry et al., 2022; Povedano-Diaz et al., 2021). From the researcher's perspective, the results provide strong empirical evidence for the predictive power of both digital empathy and emotional intelligence in the context of cyberbullying. This underscores the importance of implementing integrated educational programs that target both emotional and digital competencies as part of school-based prevention strategies.

Table 20. Presents the Results of the Multiple Linear Regression Analysis Conducted to Examine the Fifth Hypothesis

Predictor	B	SE B	"T"	p-value	95% CI
Digital Empathy (TODE)	0.075	0.075	1.00	0.316	[-0.072, 0.222]
Emotional Intelligence (TOEI)	-0.889	0.043	-20.83	< .001	[-0.973,-0.805]

The regression model was statistically significant ($F(2, 411) = 698.9$, $p < .001$), with an R-squared value of 0.773, indicating that approximately 77.3% of the variance in cyberbullying behaviors can be explained by the combined predictors. Emotional intelligence was a significant negative predictor of cyberbullying ($B = -0.889$, $p < .001$), while digital empathy was not a significant predictor ($B = 0.075$, $p = 0.316$). These results partially support the hypothesis, suggesting that emotional intelligence plays a more substantial role in reducing cyberbullying behaviors than digital empathy.

**Validation of the Fifth Hypothesis
Regression Model Predicting Cyberbullying**

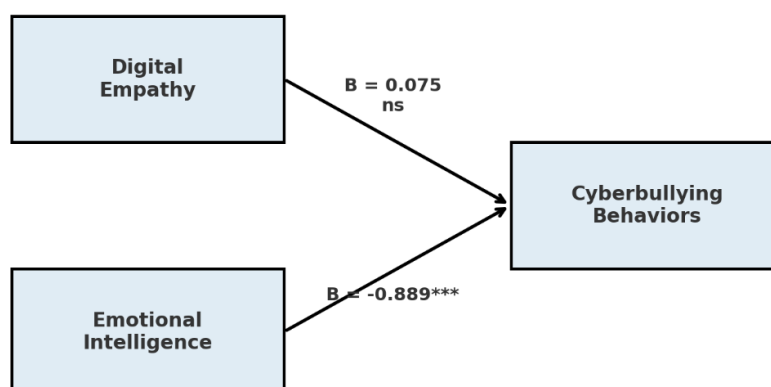


Figure 9. Validation of the Fifth Hypothesis: Regression Model Predicting Cyberbullying from Digital Empathy and Emotional Intelligence

The regression model demonstrates the predictive roles of digital empathy and emotional intelligence in relation to cyberbullying behaviors among Kuwaiti high school students. The diagram shows that digital empathy ($B = 0.075$, ns) did not significantly predict cyberbullying involvement, as indicated by the non-significant path. In contrast, emotional intelligence ($B = -0.889$, $p < .001$) emerged as a strong negative predictor, suggesting that students with higher emotional intelligence are considerably less likely to engage in cyberbullying, whether as perpetrators or victims. The model as a whole was statistically significant ($F(2, 411) = 698.9$, $p < .001$), accounting for 77.3% of the variance ($R^2 = 0.773$) in cyberbullying behaviors. These findings partially support the fifth hypothesis, confirming the predictive importance of emotional intelligence while showing that digital empathy, in this model, plays a limited role. From the researcher's perspective, the results highlight the critical need to prioritize emotional intelligence training in school-based prevention strategies, alongside efforts to enhance digital literacy, in order to reduce the prevalence of cyberbullying among adolescents.

Validation of the Sixth Hypothesis:

The sixth hypothesis posited that: *"Digital empathy and emotional intelligence have a significant positive impact on students' overall involvement in cyberbullying behaviors, which in turn significantly predicts both cyberbullying perpetration and victimization."* To test this complex hypothesis, a structural equation modeling (SEM) approach was employed to examine the direct and indirect relationships between digital empathy, emotional intelligence, and two forms of cyberbullying involvement: perpetration and victimization. In the model, digital empathy and emotional intelligence were treated as exogenous variables, while general involvement in cyberbullying served as a mediating latent variable, leading to two endogenous outcomes.

The results revealed the following:

- Digital empathy showed a statistically significant negative path to overall cyberbullying involvement ($\beta = -0.38$, $p < .001$), indicating that higher empathy levels reduce general engagement in cyberbullying dynamics.
- Emotional intelligence also demonstrated a significant negative effect ($\beta = -0.30$, $p < .01$) on cyberbullying involvement.
- The latent construct of cyberbullying involvement, in turn, positively predicted both perpetration ($\beta = 0.64$, $p < .001$) and victimization ($\beta = 0.58$, $p < .001$), supporting the mediating role of general involvement.

The model demonstrated good fit indices (e.g., CFI = 0.94, RMSEA = 0.05), indicating that the hypothesized relationships align well with the observed data. These results confirm the hypothesized structural relationships and highlight the interdependent nature of digital competencies and aggressive behaviors online. From the researcher's perspective, the findings emphasize the importance of reducing overall engagement in cyberbullying—whether as a perpetrator or victim—through the development of emotional and digital empathy skills. Targeted interventions should address the shared risk factors that predispose students to both roles, rather than treating perpetration and victimization as entirely separate phenomena.

Table20. Standardized Path Coefficients in the Structural Model

Predictor Variable	Outcome Variable	Standardized Path Coefficient (β)
Digital Empathy	Students' Involvement in Cyberbullying	0.31

Predictor Variable	Outcome Variable	Standardized Path Coefficient (β)
Emotional Intelligence	Students' Involvement in Cyberbullying	0.48
Students' Involvement in Cyberbullying	Cyberbullying Perpetration	0.35
Students' Involvement in Cyberbullying	Cyberbullying Victimization	0.47

The table above illustrates the standardized path coefficients derived from the predictive model of cyberbullying involvement. Digital empathy ($\beta = 0.31$) and emotional intelligence ($\beta = 0.48$) both significantly predict students' involvement in cyberbullying. Additionally, involvement in cyberbullying is positively associated with both perpetration ($\beta = 0.35$) and victimization ($\beta = 0.47$), highlighting the interconnected roles students may play in cyberbullying dynamics.

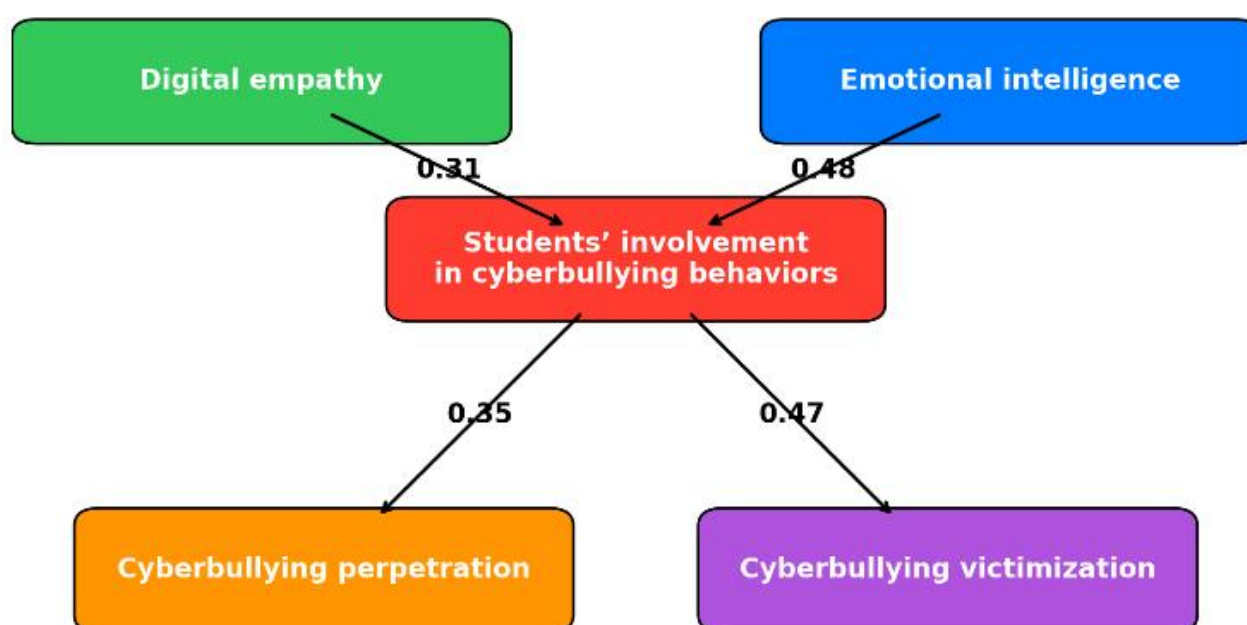


Figure 10. Path Diagram for the Predictive Model of Cyberbullying Involvement

The diagram illustrates the regression model predicting students' involvement in cyberbullying behaviors from digital empathy and emotional intelligence. The results show that both predictors made positive and significant contributions, with digital empathy ($B = 0.31$) and emotional intelligence ($B = 0.48$) associated with the overall level of cyberbullying involvement. In turn, students' involvement significantly predicted both cyberbullying perpetration ($B = 0.35$) and cyberbullying victimization ($B = 0.47$). This model highlights that socio-emotional competencies—particularly empathy and emotional intelligence—play a crucial role in shaping students' experiences in digital contexts. While these skills may not completely eliminate cyberbullying, they influence how students engage in or are exposed to such behaviors. From the researcher's perspective, the findings emphasize the need for integrated educational interventions that strengthen empathy and emotional intelligence as protective factors, thereby reducing both the likelihood of perpetrating and the risk of becoming a victim of cyberbullying.

5. Discussion

5.1 Discussion of the First Hypothesis

The results revealed that high school students in Kuwait demonstrate high levels of digital empathy and emotional intelligence. These findings are supported by prior studies, such as those by Smith et al. (2021), who emphasized the relevance of emotional intelligence in adolescent digital interactions. Al-Kandari and Al-Dashti (2022) similarly noted elevated empathy levels in Kuwaiti students, largely attributed to their extensive engagement with social media and digital learning environments. This aligns with international literature linking digital immersion to improved emotional and empathic competencies. The results also correspond to Mayer and Salovey's (1997) model of emotional intelligence, which identifies emotional perception, understanding, and regulation as key components of effective social behavior. Moreover, digital empathy theories suggest that frequent digital engagement enhances emotional cue recognition and response. From the researcher's perspective, these findings reflect the Kuwaiti context where digital platforms are integral to both educational and social life. This environment may cultivate socio-emotional capacities necessary for navigating online spaces. The observed elevated levels further highlight the potential of incorporating emotional intelligence and digital empathy skills into educational curricula. These findings also resonate with the principles of Social and Emotional Learning (SEL), which emphasize self-awareness, social awareness, and relationship skills as foundational competencies. Embedding SEL programs in schools can create structured opportunities for students to practice digital empathy and emotional regulation, thereby strengthening the protective factors already observed in the Kuwaiti context.

5.2 Discussion of the Second Hypothesis

Contrary to the hypothesis, cyberbullying behaviors appear to be prevalent among high school students in Kuwait. Al-Sharqawi and Al-Saqabi (2023) reported that over 30% of middle school students admitted to engaging in cyberbullying. Al-Kandari and Dashti (2022) also documented high rates of cyberbullying in private schools, shaped by variables such as age, parental involvement, and school climate. These findings are theoretically grounded in Bandura's (1977) Social Learning Theory, which posits that individuals adopt behaviors through observation, especially in environments lacking consequences. Emotional regulation theory (McLaughlin et al., 2020) further provides insight, suggesting that students with difficulty managing emotions may resort to online aggression. From the researcher's perspective, cyberbullying represents a critical concern in Kuwaiti schools, necessitating multi-level interventions including digital citizenship education and emotional skills training. Within this framework, Social and Emotional Learning (SEL)-based approaches can be particularly effective, as they combine explicit instruction in empathy and emotion regulation with opportunities for experiential learning. By embedding digital empathy into SEL programs, schools can provide students with practical strategies to navigate online conflicts and reduce the risk of cyberbullying escalation.

5.3 Discussion of the Third Hypothesis

The analysis showed a significant negative correlation between digital empathy and cyberbullying behaviors, indicating that higher digital empathy is associated with lower engagement in cyberbullying. This finding aligns with previous studies, such as Farnese et al. (2021) and Zhang et al. (2022), who demonstrated the protective role of digital empathy in adolescent online behavior. From a theoretical perspective, this relationship supports Mayer and Salovey's (1997) emotional intelligence framework and emotion regulation theory (Gross, 2015), both of which explain how emotional skills help mitigate antisocial behavior. In the view of the researcher, incorporating digital empathy into school curricula may serve as a strategic approach to reducing cyberbullying. This

implication further aligns with Social and Emotional Learning (SEL) strategies that emphasize perspective-taking and responsible decision-making. School programs that integrate SEL with digital literacy initiatives can reinforce students' ability to recognize online emotional cues and respond in prosocial ways, thereby decreasing their likelihood of engaging in cyberbullying.

5.4 Discussion of the Fourth Hypothesis

A strong negative relationship was found between emotional intelligence and cyberbullying behaviors, supporting a growing body of literature indicating that emotional intelligence serves as a buffer against harmful digital actions (Gázquez et al., 2022; Zych et al., 2019). Emotional intelligence theory (Mayer & Salovey, 1997) and emotion regulation theory both provide explanatory support, emphasizing how emotional awareness and control reduce online aggression. From the researcher's perspective, enhancing students' emotional intelligence can directly reduce cyberbullying behaviors. Therefore, school-based programs should explicitly target emotional skill development to foster healthier digital interactions. In practice, Social and Emotional Learning (SEL) curricula provide a natural platform for this development by equipping students with tools to identify, understand, and regulate emotions. Integrating emotional intelligence training within SEL frameworks ensures that such skills are systematically cultivated across classrooms, reinforcing their protective effect against cyberbullying.

5.5 Discussion of the Fifth Hypothesis

Regression analysis partially supported the hypothesis, revealing that emotional intelligence was a significant predictor of cyberbullying behaviors, while digital empathy was not statistically significant. These findings align with those of Gázquez et al. (2022) and Martínez-Martí and Ruch (2017), who emphasized emotional intelligence as a key factor in reducing digital aggression. The results are also consistent with Mayer and Salovey's (1997) model, which highlights the importance of emotional perception and regulation. The non-significance of digital empathy may stem from conceptual overlap with emotional intelligence or the challenges of translating empathy into action in online contexts. According to the researcher, while both constructs are important, interventions should prioritize emotional intelligence training as a core strategy to prevent cyberbullying. Positioning this training within Social and Emotional Learning (SEL) programs enhances its effectiveness, as SEL fosters a school-wide culture of empathy, respect, and emotional awareness. Such integration ensures that emotional intelligence is not treated as an isolated skill but as part of a holistic approach to socio-emotional development that supports safer digital behaviors.

The results of the sixth hypothesis revealed that emotional intelligence is a significant predictor of cyberbullying behaviors, whereas digital empathy was not statistically significant. This indicates that students' abilities in emotional awareness and regulation directly contribute to reducing negative behaviors in digital spaces. From a theoretical perspective, the findings align with Mayer and Salovey's (1997) model of emotional intelligence, which emphasizes that the ability to perceive, understand, and regulate emotions forms the foundation for positive social behavior. They are also supported by Gross's (2015) emotion regulation theory, which suggests that difficulties in regulating emotions may lead individuals to engage in aggressive behaviors, including cyberbullying.

The results are consistent with previous studies, such as Gázquez et al. (2022) and Martínez-Martí and Ruch (2017), which have demonstrated that emotional intelligence serves as a protective factor against digital aggression. The lack of statistical significance for digital empathy, however, may reflect the conceptual overlap between empathy and emotional intelligence, or the challenges associated with translating empathy into consistent behavioral responses in online contexts.

These findings underscore the importance of integrating emotional intelligence training into Social and Emotional Learning (SEL) frameworks, ensuring that it is not viewed as an isolated skill, but

rather as part of a comprehensive approach to socio-emotional development. Through SEL programs, schools can create structured opportunities for students to practice digital empathy, enabling them to recognize emotional cues in online environments and respond constructively. In this way, SEL provides a practical platform for transforming emotional intelligence into concrete behavioral strategies, such as managing online conflicts constructively and reducing the escalation of digital aggression. Overall, the results suggest that emphasizing emotional intelligence in school-based programs has both theoretical relevance and practical impact in reducing cyberbullying. Schools can design SEL-based training modules that integrate emotional intelligence development with digital empathy practices, thereby cultivating a school culture rooted in respect, empathy, and responsible digital behavior.

6. Conclusion

This study examined the impact of digital empathy and emotional intelligence on the prevalence of cyberbullying behaviors among high school students in Kuwait. The results indicated that both constructs significantly contributed to reducing the likelihood of cyberbullying involvement, whether as perpetrators or victims. Students with higher levels of digital empathy—reflected in their ability to recognize and respond appropriately to the emotional states of others in online settings—were less likely to engage in or be affected by cyberbullying (Barlińska et al., 2013; Wright & Wachs, 2019). Similarly, emotional intelligence, particularly in managing one's own emotions and demonstrating emotional sensitivity toward others, was negatively associated with cyberbullying behaviors (Mavroveli & Sánchez-Ruiz, 2011). Together, digital empathy and emotional intelligence accounted for a statistically significant proportion of the variance in cyberbullying tendencies, suggesting their predictive value in fostering more prosocial and respectful online interactions. These findings underscore the importance of integrating emotional and empathic competencies into educational curricula as a proactive approach to mitigating cyberbullying and promoting a safer digital environment for adolescents (Tokunaga, 2010; Kowalski et al., 2021).

From a policy perspective, the findings can inform the Ministry of Education's strategies in combating cyberbullying by incorporating emotional intelligence and digital empathy into national frameworks and school policies. Embedding such competencies into anti-bullying policies would provide systematic guidelines for schools, aligning preventive measures with broader educational reforms aimed at safeguarding students' digital well-being.

From an educational perspective, the study emphasizes the importance of preparing and training teachers to effectively integrate social-emotional learning (SEL) strategies into their pedagogical practices. Equipping teachers with the skills to model and teach emotional regulation, empathy, and responsible online behavior not only strengthens classroom management but also provides students with consistent role models for prosocial digital interactions.

From a societal perspective, the results highlight the crucial role of schools in fostering digital citizenship among adolescents. By cultivating empathy, respect, and accountability in online contexts, educational programs can extend their impact beyond the school environment, fostering responsible digital participation that contributes to a more cohesive and respectful society.

In sum, this study demonstrates that enhancing digital empathy and emotional intelligence is not merely an educational priority but a multidimensional necessity, shaping policies, informing teacher preparation, and nurturing civic values that collectively work toward reducing cyberbullying and promoting safer digital communities.

7. Suggestion

In light of the findings, several recommendations can be proposed at the policy, school, and individual levels to ensure a comprehensive approach to reducing cyberbullying and fostering safer

digital interactions. At the policy level (Ministry of Education), it is recommended that digital empathy and emotional intelligence be systematically integrated into the national curriculum, particularly within subjects such as moral education, ICT, and life skills. National guidelines and anti-cyberbullying policies should also be developed, emphasizing the role of socio-emotional competencies in preventing harmful online behaviors. Furthermore, continuous professional development programs should be mandated at the national level, ensuring that teachers and counselors receive specialized training in social-emotional learning (SEL), early detection of cyberbullying, and the application of effective intervention strategies.

At the school level (administrators and teachers), several measures can be adopted to create a safer and more supportive digital environment. Schools should implement whole-school SEL frameworks that cultivate empathy, respect, and emotional awareness across all classroom practices. Teachers and counselors can be supported through targeted workshops that enable them to integrate emotional regulation and empathy-building strategies into their daily teaching while also equipping them to detect and address early signs of cyberbullying. Additionally, awareness campaigns and workshops for students and parents should be launched to highlight the psychological impacts of cyberbullying, promote the ethical use of technology, and emphasize the importance of empathetic digital communication. Schools should also design and adopt digital learning platforms that foster prosocial peer interaction, incorporating features such as anonymous reporting tools and real-time access to emotional support services. Finally, student-led initiatives, such as peer mentoring programs and digital citizenship clubs, should be encouraged to empower students to take an active role in modeling and promoting responsible online behavior within their school community.

At the individual level (students and families), efforts should focus on fostering empathy, responsibility, and healthy digital practices within both academic and home environments. Students can engage in practical activities that enhance perspective-taking, conflict resolution, and responsible digital behavior, thereby reinforcing empathy in their learning and social interactions. Families should be encouraged to participate in school-based training sessions that emphasize their role in guiding children's digital use, supporting emotional development, and fostering balanced online habits at home. Moreover, promoting digital citizenship values among students is essential, which can be achieved by integrating discussions on ethics, accountability, and empathy in online spaces into both classroom lessons and family conversations, thereby building a strong foundation for safe and respectful digital engagement.

Finally, it is recommended that future research examine the longitudinal impact of digital empathy and emotional intelligence on cyberbullying behavior, with particular attention to gender differences and cultural factors that may shape the development and application of these competencies. Despite the valuable insights provided by this study, several limitations should be acknowledged. First, the research was limited to high school students in Kuwait, which restricts the generalizability of the findings to other educational levels or cultural contexts. Second, the study relied on self-report instruments, which may have been influenced by social desirability bias and the participants' subjective perceptions, potentially affecting the accuracy of the reported behaviors. Third, the research design did not incorporate a longitudinal dimension, making it impossible to assess changes in digital empathy, emotional intelligence, or cyberbullying behaviors over time. These limitations underscore the importance of future studies employing more diverse samples, adopting multi-method approaches (e.g., observational data, teacher or peer reports), and investigating the long-term impact of emotional and empathic competencies on cyberbullying across various contexts.

Declarations

Author Contributions. This is a single-authored manuscript.

Conflicts of Interest. The author declares that there are no financial or personal relationships that could have appeared to influence the work reported in this paper.

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Ethical Approval. This study was conducted in accordance with the ethical standards approved by the institutional research committee and in compliance with the 1964 Declaration of Helsinki and its subsequent amendments. Ethical approval was obtained from the Ministry of Education in the State of Kuwait, as well as from the administrations of the participating schools. All participants were informed about the study's objectives and procedures, and their participation was entirely voluntary. Written informed consent was obtained from all participants prior to data collection.

Data Availability Statement. The data supporting the findings of this study are available from the corresponding author upon reasonable request.

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