

Evaluating the Digital Leadership Competence of School Heads from Teachers' Perspectives: An Exploratory Study

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Abstract

This study examined the digital leadership competencies of elementary school heads in Villaverde District, Schools Division of Nueva Vizcaya, as perceived by public elementary school teachers. Guided by established digital leadership frameworks, transformational leadership, instructional leadership, and distributed leadership, the study aimed to assess school heads' digital leadership competencies, identify their strengths and areas for improvement, and provide interventions to strengthen leadership practices. A descriptive-correlational research design was employed using a structured survey questionnaire supplemented by interviews. The respondents were public elementary school teachers selected through stratified random sampling from the twelve public elementary schools in the district. Descriptive statistics, including frequency, percentage, weighted mean, and standard deviation, were used to analyze the data. The findings revealed that teachers generally perceived the digital leadership competencies of school heads as evident, while digital leadership practices and strengths were rated as very evident. School heads demonstrated strong performance in digital infrastructure development, technology integration, digital communication, innovation, and professional development. However, opportunities for improvement were identified in strengthening teachers' digital competencies, enhancing communication of digital initiatives, providing continuous technology-related training, promoting inclusive digital environments, and improving data-informed decision-making. The study concludes that effective digital leadership positively contributes to teaching, learning, and school management and recommends continuous professional development, stronger stakeholder engagement, expanded teacher support, and sustained investment in digital resources and infrastructure. This study supports Sustainable Development Goal 4 (Quality Education) by promoting effective educational leadership and technology-enhanced learning, and Sustainable Development Goal 9 (Industry, Innovation and Infrastructure) by encouraging digital innovation and technology integration in schools. The findings contribute to institutional sustainability by providing evidence that supports leadership development, continuous professional growth, and the long-term improvement of digital transformation initiatives in elementary education.

Keywords: Digital Leadership, Elementary Schools, School Heads, Technology Integration, Teachers' Perceptions, Villaverde District

1. Introduction

The rapid advancement of digital technologies has transformed educational leadership, requiring school heads to move beyond traditional administrative functions and develop competencies that promote innovation, technology integration, and effective instructional leadership. In response to the increasing demand for digitally competent learning environments, school leaders are expected to guide teachers in utilizing technology to improve teaching, learning, and school management. This study examines teachers' perceptions of the digital leadership competence of elementary school heads in Villaverde District, Schools Division of Nueva Vizcaya. It also explores the relationship between demographic characteristics and digital leadership competencies, identifies existing challenges, and proposes interventions that can strengthen leadership practices. The study seeks to contribute empirical evidence that supports leadership development, policy formulation, and the continuous improvement of digital leadership in elementary education.

1.1 Background of Digital Leadership Competence of Elementary School Heads

Educational leadership has evolved significantly due to rapid technological advancement, making digital leadership an essential competency for school heads. School leaders are now expected to adopt technology-driven, innovative, and adaptive leadership approaches that promote effective teaching and learning while ensuring efficient school management. This transformation is consistent with Sustainable Development Goal 4 (SDG 4), particularly Target 4.4, which emphasizes developing relevant technical and digital competencies necessary for lifelong learning and employment. In the Philippines, digital leadership is supported by national educational policies, including DepEd Order No. 42, s. 2017, the MATATAG Agenda, DepEd Order No. 002, s. 2024, DepEd Memorandum No. 008, s. 2023, and the Philippine Professional Standards

for School Heads under DepEd Order No. 24, s. 2020. These policies redefine the responsibilities of school heads by emphasizing instructional leadership, ICT integration, digital transformation, learner well-being, and the creation of inclusive and digitally safe learning environments. The COVID-19 pandemic further emphasized the importance of digital leadership as schools shifted to remote and blended learning. School leaders with strong digital competencies demonstrated greater adaptability in sustaining educational continuity, supporting teachers, and integrating digital technologies into instruction. However, the pandemic also exposed continuing challenges, including disparities in digital competencies, infrastructure limitations, technostress, and inadequate technical support among educators and administrators. Despite increasing recognition of digital leadership, limited studies have focused specifically on elementary school heads, particularly within localized settings such as Villaverde District, Schools Division of Nueva Vizcaya. Understanding teachers' perceptions provides valuable insights into leadership effectiveness because teachers directly experience the influence of school leaders on technology integration, instructional practices, and professional development. This study therefore evaluates the digital leadership competence of elementary school heads, examines demographic influences and existing hindrances, and proposes interventions to strengthen digital leadership practices in elementary schools.

1.2 Digital Leadership Competence and Teachers' Perspectives: Themes from Related Literature

Related literature consistently identifies digital leadership as a strategic approach that enables school administrators to improve school management, instructional quality, stakeholder engagement, and organizational innovation (Sheninger, 2019). Effective digital leaders establish a clear vision for technology integration, promote digital literacy, model ethical technology use, and create safe, inclusive, and engaging digital learning environments (Ertmer & Ottenbreit-Leftwich, 2013; Ahlquist, 2020; ISTE, 2018). Digital leadership competencies encompass communication, instructional leadership, strategic vision, technology self-efficacy, change management, and professional development (Fullan & Quinn, 2020). Technology self-efficacy enables school heads to confidently implement digital initiatives, mentor teachers, and make informed investments in educational technologies (Bandura, 1997; Trust & Whalen, 2021). Within the Philippine setting, ICT integration is recognized as a critical leadership competency that extends beyond administrative efficiency to include instructional leadership and community collaboration (Department of Education, 2020; Marcelo & Yazon, 2022). Various leadership models further explain digital leadership in schools. Sheninger (2019) emphasized vision, culture, professional development, innovation, and stakeholder engagement, while Fullan and Quinn (2020) highlighted coherence, capacity building, and purposeful technology integration. Digital leadership also aligns with transformational leadership, instructional leadership, and distributed leadership by promoting collaboration, teacher empowerment, continuous improvement, and sustainable technology integration (Harris & Jones, 2020; Leithwood et al., 2021; Hallinger, 2011; Spillane, 2012). Empirical studies indicate that digital leadership positively influences teacher performance, organizational effectiveness, student engagement, and school resilience. Teachers' willingness to adopt digital technologies is strongly associated with leadership support and administrators' technology self-efficacy (Harris and Jones, 2020; Leithwood et al., 2021; Trust and Whalen, 2021). Philippine studies similarly demonstrate that digitally competent school leaders enhance teacher readiness and instructional innovation despite continuing challenges related to technostress, infrastructure, internet connectivity, digital resources, and policy implementation (Marcelo and Yazon, 2022; Tanucan et al., 2022; De Guzman, 2020; Reyes, 2021; Cruz, 2023; Santos, 2022; Bautista, 2023; Almazan and Salazar, 2019; Dela Cruz, 2021; Labrador and Reyes, 2020; Morales, 2022).

1.3 Global, National, and Local Context of Digital Leadership in Elementary Schools

Globally, educational institutions recognize digital leadership as a critical factor in sustaining quality education amid technological change. International studies report that digitally competent leaders improve teacher performance, student engagement, organizational innovation, and institutional resilience, particularly during educational disruptions such as the COVID-19 pandemic (Harris and Jones, 2020; Trust and Whalen, 2021; Leithwood et al., 2021; OECD, 2021). Nevertheless, global concerns remain regarding cybersecurity, data privacy, ethical technology use, technostress, and unequal access to digital resources (Al-Fudail and Mellor, 2021). Nationally, the Department of Education continues to institutionalize digital transformation through policies supporting ICT integration, digital learning, and leadership standards for school heads. Despite these initiatives, studies reveal persistent challenges involving infrastructure, technical support, professional development, resistance to change, and disparities between urban and rural schools (DepEd Order No. 24, s. 2020; Marcelo and Yazon, 2022; Tanucan et al., 2022). Within Villaverde District, Schools Division of Nueva Vizcaya, limited empirical evidence exists regarding teachers' perceptions of the digital leadership competence of elementary school heads. Evaluating leadership practices within this local context provides valuable information that may strengthen leadership development, technology integration, and school improvement initiatives.

1.4 Theoretical and Conceptual Basis of Digital Leadership Competence

The study is anchored on established theories and frameworks explaining digital leadership in educational settings. Sheninger's (2019) Digital Leadership Framework emphasizes vision, innovation, professional development, culture, and stakeholder engagement. Fullan and Quinn's (2020) Digital Transformation Framework highlights coherence, deep learning, and capacity building in technology integration. Transformational Leadership Theory explains how school heads motivate teachers toward innovation and continuous professional growth (Leithwood et al., 2021), while Instructional

Leadership (Hallinger, 2011) and Distributed Leadership (Spillane, 2012) emphasize collaborative leadership, instructional improvement, and shared responsibility for technology integration. Together, these frameworks support the examination of digital leadership competencies among elementary school heads as perceived by teachers. Conceptually, the study examines the relationship among demographic characteristics, digital leadership competencies, perceived hindrances, and proposed interventions. Demographic variables include age, gender, years of service, educational attainment, position, and school size. These variables are analyzed alongside teachers' perceptions of school heads' digital leadership competencies to identify strengths, challenges, and appropriate interventions that contribute to enhanced digital leadership in Villaverde District.

1.5 Research Gaps on Digital Leadership Competence of Elementary School Heads

Although previous studies consistently demonstrate the positive influence of digital leadership on school effectiveness, teacher performance, and technology integration, most investigations concentrate on secondary schools, higher education institutions, or broad educational contexts. Limited research specifically examines digital leadership competencies among elementary school heads, particularly within localized Philippine settings such as Villaverde District, Schools Division of Nueva Vizcaya. Furthermore, few studies emphasize teachers' perceptions as the primary basis for evaluating digital leadership competence. Addressing these gaps provides localized evidence that may guide leadership development programs, policy implementation, and school-based digital transformation initiatives.

1.6 Alignment with Relevant Sustainable Development Goals (SDGs)

This study directly supports Sustainable Development Goal 4 (Quality Education) by examining the digital leadership competencies of elementary school heads that contribute to inclusive, equitable, and technology-enabled education. Strengthening digital leadership promotes effective technology integration, continuous professional development, and improved instructional practices that enhance teaching and learning. The study also aligns with SDG 9 (Industry, Innovation and Infrastructure) by promoting digital innovation and technology integration within schools through effective educational leadership. By identifying competency gaps and proposing appropriate interventions, the study supports the continued advancement of digital transformation in basic education.

1.7 Importance of the Study to Multidisciplinary Sustainability

The study contributes to educational sustainability by providing evidence that can improve digital leadership, instructional quality, teacher professional development, and school management. It supports continuous learning environments that adapt to technological advancement while strengthening leadership capacity in elementary schools. The findings also contribute to institutional and policy sustainability by providing empirical information that may guide school administrators, Schools Division Offices, teacher education institutions, training providers, and policymakers in developing leadership programs, professional development initiatives, and evidence-based policies that strengthen digital transformation in Philippine basic education. Finally, the study promotes technological sustainability by encouraging effective and responsible integration of digital technologies that enhance organizational effectiveness and future-ready learning environments.

2. Material and methods

2.1 Research Design

The study utilized a descriptive-correlational research design. The descriptive component determined the existing level of digital leadership competencies among elementary school heads by describing their strengths and areas for improvement in leading digital initiatives. The correlational component examined the relationship between selected profile variables, including age, years of experience, and educational background, and digital leadership competence. Teachers' perceptions served as the basis for evaluating school heads' leadership practices, providing a practical understanding of how digital leadership influences the school environment and instructional practices.

2.2 Locale of the Study

The study was conducted in Villaverde District, Schools Division of Nueva Vizcaya, which consists of twelve public elementary schools led by twelve school heads. The selected teacher-respondents represented the schools within the district and provided firsthand perceptions of their school heads' digital leadership competencies. The district was considered appropriate research setting because of its collaborative educational environment and its commitment to adapting digital innovations in education. The geographical context of the study shows that Villaverde is one of the municipalities of Nueva Vizcaya, a province composed of fifteen municipalities. The municipality is recognized for its agricultural heritage, close-knit community, and commitment to educational development, making it an appropriate setting for examining digital leadership practices in elementary schools.

2.3 Respondents of the Study

The respondents were public elementary school teachers from the twelve public elementary schools in Villaverde District, Schools Division of Nueva Vizcaya. As direct recipients of school leadership, these teachers provided valuable information regarding the digital leadership competencies of their respective school heads. Their experiences and observations served as the primary basis for assessing leadership practices within the district.

2.4 Sample and Sampling Procedure

The study employed stratified random sampling to ensure adequate representation of teachers across participating schools. The sampling procedure considered variations in school size and position ranks to obtain a balanced distribution of respondents. This approach enhanced the representativeness of the sample and provided a comprehensive assessment of teachers' perceptions regarding the digital leadership competencies of elementary school heads throughout the district.

2.5 Research Instrument

A structured survey questionnaire served as the primary data-gathering instrument. The questionnaire collected information on respondents' demographic characteristics and assessed the digital leadership competencies of elementary school heads through statements measuring leadership skills, digital capabilities, and confidence in utilizing digital technologies within the educational setting. To complement the survey data, interviews were conducted to obtain further clarification and richer insights regarding respondents' perceptions. The combination of survey questionnaires and interviews provided both measurable data and contextual information, resulting in a more comprehensive evaluation of digital leadership competencies among elementary school heads in Villaverde District.

2.6 Data Gathering Procedure

Prior to data collection, the researcher secured formal approval from the Schools Division Superintendent through the appropriate district office. Upon receiving permission, the researcher coordinated with the participating schools and invited the selected teacher-respondents to participate in the study. The purpose of the research was clearly explained to all participants, and confidentiality of their responses was assured throughout the conduct of the study. Participation was carried out in an ethical, respectful, and transparent manner to encourage honest responses while protecting the rights, privacy, and welfare of the respondents.

2.7 Data Analysis Techniques

Descriptive statistics were employed to analyze the data. Frequency counts and percentage distributions were used to describe the demographic profile of the respondents. Weighted mean and standard deviation were computed to determine the overall level of teachers' perceptions regarding the digital leadership competencies of elementary school heads and to measure the consistency of their responses. Specifically, frequency and percentage were used to summarize respondents' personal characteristics, while the weighted mean was utilized to determine the general level of responses to the survey instrument. These statistical techniques provided an objective basis for interpreting the findings and evaluating the digital leadership competencies of elementary school heads in Villaverde District.

3. Results and Discussion

3.1 Respondents' Demographic Profile

3.1.1 Gender of the Respondents

The respondents consisted of 20 public elementary school teachers, of whom 12 (60%) were female and 8 (40%) were male. The results indicate that female teachers comprised the majority of the respondents, reflecting greater female representation among the participating teachers. The predominance of female respondents provides context for interpreting teachers' perceptions of digital leadership. Since most responses came from female teachers, their experiences and expectations may have influenced the overall assessment of school heads' digital leadership competencies. This demographic profile also suggests the importance of considering gender perspectives when interpreting leadership practices and planning future leadership development initiatives.

3.1.2 Age of the Respondents

The respondents represented different age groups, providing a balanced distribution across various career stages. Teachers aged 36–40 years constituted the largest group with 25%, followed by the 26–30, 31–35, and 41 years and above groups with 20% each, while those aged 20–25 years accounted for 15% of the respondents. The relatively balanced age distribution indicates that the study captured perspectives from both younger and more experienced teachers. This diversity contributes to a broader understanding of digital leadership, as teachers from different age groups may differ in their familiarity with technology, leadership expectations, and professional experiences, resulting in more comprehensive perceptions of school heads' digital leadership competencies.

3.1.3 Civil Status of the Respondents

Most respondents were married, comprising 75% of the sample, while 25% were single. No respondent reported being widowed. These findings indicate that the majority of participating teachers were in the married life stage. Civil status provides additional context in understanding teachers' perceptions because personal responsibilities and work-life balance may influence professional experiences and leadership expectations. Recognizing these differences contributes to a more nuanced interpretation of how respondents perceive digital leadership practices within their schools.

3.1.4 Highest Educational Attainment of the Respondents

Most respondents had pursued graduate education. The largest group consisted of teachers with units in a master's degree program (65%), followed by master's degree graduates (20%), bachelor's degree holders (10%), and teachers with doctoral units (5%). None had completed a doctoral degree. The findings indicate a strong commitment to continuing professional education among the respondents. Advanced educational qualifications may contribute to greater familiarity with leadership concepts, educational innovation, and technology integration, thereby influencing teachers' perceptions of digital leadership competence. The results also emphasize the value of continuous professional development in strengthening leadership and instructional practices.

3.1.5 Length of Teaching Experience

The respondents were generally experienced educators. Teachers with 11–15 years of service comprised the largest group (35%), followed by those with 16–20 years (30%). Teachers with 6–10 years represented 15%, while those with 1–5 years and more than 21 years each accounted for 10% of the sample. The predominance of experienced teachers suggests that respondents possess substantial professional knowledge and long-term exposure to changes in educational leadership and technology integration. Their extensive experience provides meaningful perspectives on the effectiveness of school heads' digital leadership and the evolution of digital practices in elementary education.

3.1.6 Current Position of the Respondents

The respondents represented different teaching positions. Teacher II and Teacher III each accounted for 30% of the respondents, while Teacher I and Master Teachers each represented 20%. This distribution reflects participation from teachers with varying levels of responsibility and experience. The inclusion of respondents from different position ranks provided diverse perspectives regarding school heads' digital leadership. Teachers occupying higher positions, particularly Master Teachers, may possess broader experiences in instructional supervision, mentoring, and school improvement initiatives, contributing to a more comprehensive assessment of leadership practices.

3.1.7 Latest Performance Rating of the Respondents

The respondents demonstrated high professional performance, with 90% receiving an Outstanding rating and the remaining 10% obtaining a Very Satisfactory rating. None of the respondents received lower performance classifications. These findings indicate that the respondents generally exhibit high levels of teaching competence and professional commitment. Their strong performance may contribute to informed evaluations of school heads' digital leadership, as competent teachers are more likely to appreciate and assess leadership practices related to digital innovation and instructional improvement.

3.1.8 Seminars and Trainings Attended

All respondents had participated in district-level seminars and training activities, while 90% attended division-level programs. Participation declined at higher levels, with 25% attending regional seminars, 10% attending national programs, and none participating in international training. The findings demonstrate that respondents actively engage in professional development, particularly within the district and division levels. However, the limited participation in regional, national, and international training suggests opportunities to broaden teachers' exposure to emerging educational technologies and leadership innovations. Expanding participation in higher-level professional development activities may further strengthen teachers' digital competencies and support the successful implementation of digital leadership initiatives in schools.

3.2 Teachers' Perceptions of the Digital Leadership Competencies of School Heads

3.2.1 Teachers' Assessment of Digital Leadership Competencies

The findings indicate that teachers generally perceived the digital leadership competencies of their school heads as Evident, with an overall weighted mean of 4.07. The highest-rated competency was maintaining a strong online presence to communicate with the school community (WM = 4.85), followed by encouraging the use of digital resources to enhance teaching and learning (WM = 4.70), demonstrating openness to adopting new digital technologies (WM = 4.55), and utilizing data analytics for decision-making and school planning (WM = 4.30). School heads also received positive ratings for promoting digital literacy among teachers (WM = 4.25), proficiency in using digital platforms for administrative tasks (WM = 4.15), and leadership in implementing digital innovations (WM = 4.00). Lower ratings were observed in integrating digital tools into school management (WM = 3.30), providing guidance and support for teachers in using digital tools (WM = 3.35), and demonstrating digital communication skills with teachers and staff (WM = 3.25), although these competencies remained moderately evident. These findings demonstrate that teachers recognize school heads as competent digital leaders

who actively promote technology integration and digital innovation within their schools. Strong performance in online communication, digital resource utilization, and data-informed decision-making reflects school heads' commitment to leading digital transformation. However, the comparatively lower ratings in digital communication, management integration, and teacher support suggest opportunities to strengthen leadership practices that directly assist teachers in implementing digital initiatives. Continuous professional development focusing on communication, instructional support, and comprehensive digital management may further enhance the effectiveness of school heads in fostering digitally responsive learning environments.

3.3 Digital Leadership Practices of School Heads

3.3.1 Implementation of Digital Leadership Practices

The findings reveal that the digital leadership practices of school heads were perceived as Very Evident, with an overall weighted mean of 4.23. Teachers rated the encouragement to integrate digital resources into classroom instruction as the most evident practice (WM = 4.75), followed by promoting the use of digital tools for school administration (WM = 4.60), modeling effective use of social media and online communication (WM = 4.45), and using digital data to monitor and improve school performance (WM = 4.40). School heads also demonstrated strong practices in sharing updates through digital communication platforms (WM = 4.35), facilitating online meetings and virtual collaboration (WM = 4.20), supporting innovative digital projects (WM = 4.15), adopting new digital systems (WM = 4.05), and advocating for digital infrastructure (WM = 4.00). The lowest-rated practice involved providing training or workshops on new digital technologies for staff (WM = 3.35), although it remained moderately evident. The results indicate that school heads consistently integrate digital leadership into school management and instructional support. Teachers recognize their efforts to promote technology use, encourage innovation, facilitate digital communication, and utilize data for informed decision-making. These practices demonstrate leadership that supports both administrative efficiency and instructional improvement. However, the relatively lower rating for providing technology training suggests that continuous capacity-building opportunities for teachers remain an area requiring greater attention. Strengthening professional development initiatives will further equip teachers with updated digital competencies and sustain effective implementation of digital innovations across schools.

3.4 Strengths and Areas for Improvement in the Digital Leadership of School Heads

3.4.1 Strengths of School Heads' Digital Leadership

The findings show that the strengths of school heads' digital leadership were perceived as Very Evident, with an overall weighted mean of 4.30. The highest-rated strength was the school heads' proactive efforts in improving the school's digital infrastructure (WM = 4.45), followed by good digital communication skills that foster collaboration (WM = 4.40), effective leadership in adopting innovative digital tools for teaching and administration (WM = 4.30), strong skills in integrating digital technology into school management (WM = 4.20), and the promotion of continuous digital professional development for staff (WM = 4.15). These results indicate that respondents consistently recognized school heads as effective leaders in promoting digital transformation within their schools. The findings suggest that school heads possess the competencies needed to support technology integration, strengthen digital infrastructure, and promote collaboration and professional growth among teachers. Their ability to adopt innovative digital tools and integrate technology into school management demonstrates effective leadership that supports both administrative efficiency and instructional improvement. These strengths provide a strong foundation for sustaining digital transformation initiatives and fostering a technology-driven learning environment.

3.4.2 Areas for Improvement in School Heads' Digital Leadership

The respondents also identified several areas requiring further improvement, which were likewise rated Very Evident, with an overall weighted mean of 4.51. The highest priority was fostering a more inclusive digital environment for all students and staff (WM = 4.75), followed by improving communication of digital initiatives and goals to teachers and stakeholders (WM = 4.60), enhancing support for teachers' digital competencies and confidence (WM = 4.55), providing ongoing training on emerging digital technologies (WM = 4.35), and strengthening the use of data analytics for decision-making (WM = 4.30). These findings indicate that while school heads demonstrate strong digital leadership, respondents recognize opportunities for continuous improvement. The results emphasize that effective digital leadership requires continuous enhancement to address the evolving demands of technology integration in education. Strengthening teacher support, expanding professional development opportunities, improving communication with stakeholders, promoting inclusive digital practices, and maximizing data-informed decision-making can further increase the effectiveness of school heads' leadership. Focusing on these areas will help ensure that digital transformation initiatives benefit the entire school community while sustaining quality instruction and effective school management.

4. Conclusion & Recommendations

The study concludes that school heads demonstrate effective digital leadership that positively influences teaching, learning, and school management. Their strengths are evident in improving digital infrastructure, adopting innovative technologies,

promoting professional development, and supporting technology integration, which contribute to a more responsive and technology-driven educational environment. However, continuous improvement is needed in strengthening teachers' digital competencies, enhancing communication of digital initiatives, and fostering a more inclusive digital environment to sustain effective digital transformation and improve educational outcomes.

School heads should continuously strengthen their digital leadership through regular training on emerging technologies, effective digital communication, and data-driven decision-making. Greater support should also be provided to enhance teachers' digital competencies, promote equitable access to digital resources, establish collaborative professional learning communities, develop comprehensive digital transformation plans, invest in reliable digital infrastructure, and implement regular monitoring and evaluation of digital initiatives to ensure continuous improvement and alignment with school goals.

The study was limited to the assessment of the digital leadership competencies and practices of school heads based on the perceptions of teacher-respondents within the selected schools of Villaverde District, Schools Division of Nueva Vizcaya. The findings were derived from the respondents' demographic characteristics and survey responses, which may limit the generalizability of the results to other school settings or educational contexts.

Compliance with ethical standards

The author declares no conflict of interest. This study received no external funding and was conducted with the cooperation of the participating teachers and the concerned schools in Villaverde District, Schools Division of Nueva Vizcaya. Participation was voluntary, informed consent was obtained from all respondents, and data were collected through non-invasive methods using questionnaires. The confidentiality of all participants was strictly maintained, and no personally identifying information was disclosed.

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