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Assessment of Pediatric Nurses' Communication Skills with Children and Their Caregivers

Maha Alzahrani[1]*, Mayar Alsaigh[1], Ghazal Aljehni[1], Hanan Midad[1], Najat Alharbi[1], Salmah Alghamdi[1]

Faculty of Nursing, King Abdulaziz University, Jeddah, Saudi Arabia.

ABSTRACT: Effective communication is essential in pediatric nursing, where nurses must interact with both children and their caregivers to ensure safe, family-centered care. Despite its importance, limited quantitative evidence exists on pediatric nurses' communication competencies in Saudi Arabia. The aim was to assess the level of communication skills among pediatric nurses when interacting with children and their caregivers. A cross-sectional, descriptive, quantitative design was used. A convenience sample of 113 registered nurses from pediatric units completed a self-administered electronic questionnaire comprising a demographic survey and the Health Professionals Communication Skills Scale (HP-CSS). Most communication items scored at a high level (M = 3.54–3.85), with the highest score observed for respecting patient needs (M = 3.85). Three assertiveness-related items scored at a moderate level, including expressing disagreement (M = 3.06), difficulty making requests (M = 2.85), and difficulty asking for information (M = 3.20). Among the variables included in the model, age was the only factor significantly associated with communication skills. Participants aged 35–39 years (β = 0.66, 95% CI [0.00, 1.3], p = 0.049) and those aged 45–49 years (β = 0.99, 95% CI [0.21, 1.8], p = 0.014) had significantly higher communication scores compared to the reference group (aged 25–29). Pediatric nurses generally demonstrate strong communication skills, with specific gaps in assertiveness and proficiency in sign language. These findings highlight the need for targeted, experience-based communication training within pediatric nursing practice.

1. INTRODUCTION

Effective communication is an essential skill in pediatric nursing, where the patient population includes children with varying levels of understanding and emotional needs. Unlike adult care, pediatric care involves not only the child but also the caregiver, typically a parent or family member who plays a vital role in both decision-making and emotional support. In this setting, nurses must balance developmentally appropriate communication with the child while ensuring that the caregiver is informed, supported, and engaged.

In Saudi Arabia, pediatric patients are generally classified as those from birth to 14 years of age, although care may extend to 16 or 18 years of age in specialized services, depending on the complexity of the condition and continuity of care [1]. This broad developmental range requires adaptable communication skills, especially when preparing families for transitions such as hospital discharge. Studies from the region emphasized the importance of caregiver preparedness and the role of nursing communication in achieving safe and effective care transitions [2].

Effective communication is a key component of healthcare quality because it supports trust, patient safety, and improved health outcomes [3,4]. In pediatric care, communication is more complex because nurses must communicate with both the child and the caregiver. Clear, developmentally appropriate communication helps children and families understand care, supports

treatment adherence, and reduces the risk of medical errors [5,6]. Therefore, pediatric nursing requires communication that is both child-centered and family-centered.

Pediatric nurses must adapt their communication to the child's age, developmental stage, cognitive ability, and emotional state. Children may have difficulty explaining their symptoms, understanding procedures, or expressing fear and pain, making age-appropriate communication essential in this context. Nurses often use simple language, reassurance, play, observation, facial expressions, tone of voice, and therapeutic touch to help children feel safe and involved in their care. Such developmentally appropriate communication can reduce anxiety, improve cooperation, and support children's participation in healthcare decisions when appropriate [4,7,8].

Caregivers play a central role in pediatric care, as they support the child emotionally, help interpret symptoms, and participate in decision-making. Family-centered care emphasizes partnership and communication between nurses and caregivers throughout the child's hospital stay [9]. When communication is clear and supportive, caregivers are more likely to feel informed, confident, and engaged in their child's care; however, poor communication may lead to misunderstanding and reduced involvement [4]. Effective nurse–caregiver communication is particularly important during transitions, such as discharge, where it has been linked to caregiver readiness and the ability to manage care at home [2]. It also plays a key role in building trust, although parental stress and anxiety may influence how communication is perceived [10].

Despite its importance, effective communication in pediatric nursing can be limited by several barriers. Language differences between nurses, children, and caregivers are a common challenge in Saudi healthcare settings [11]. Cultural differences and workload may further affect how nurses communicate with patients and families [12]. These barriers may be more complex in pediatric settings because nurses must communicate with both the child and caregiver while considering the child's age, emotional state, and level of understanding. Recent studies have also shown that pediatric nurses may recognize gaps in their communication skills and benefit from structured training, including teach-back, therapeutic play, and targeted communication skills programs [13,14]. These findings highlight the need to assess pediatric nurses' communication skills and identify areas for further education and improvement in the field.

Communication in pediatric care becomes more challenging when children have communication difficulties, such as hearing impairment, autism spectrum disorder, or intellectual disabilities. In these cases, nurses may rely more on caregivers to interpret the child's needs and responses. However, studies in Saudi Arabia have shown that many healthcare providers have limited knowledge and training in communicating with deaf and hearing-impaired patients, including low familiarity with sign language [15,16]. Similar challenges have been reported when caring for children, particularly those with developmental or cognitive conditions, where effective communication requires additional skills and strategies [17,18]. These findings highlight the need for improved training and support to help nurses communicate effectively with all pediatric patients, including those with communication difficulties.

Ineffective communication among pediatric nurses has been significantly associated with poor patient safety outcomes, highlighting the urgent need to assess communication skills in this population [19]. Despite its importance, little is known about the actual level of communication skills among pediatric nurses in Saudi Arabia. Most available studies focus on adult nursing and do not provide a quantitative assessment of communication skills within pediatric settings. This gap highlights the need to evaluate communication practices among pediatric nurses to understand current practices and identify areas for development in the local context of Saudi Arabia. Therefore**,** this study aimed to assess the level of communication skills among pediatric nurses when interacting with children and their caregivers.

2. MATERIALS AND METHODS

2.1 Study Material

Study design

A quantitative, descriptive, cross-sectional design was applied, as cross-sectional methods are particularly suitable for representing phenomena or relationships at a given point in time [20]. This design was suitable for capturing nurses' communication abilities

at one specific time point without any intervention. This allowed for a comprehensive assessment of current communication behaviors and how they may relate to demographic characteristics.

Study settings:

The study was conducted in pediatric units, including inpatient units (General Pediatric Ward, Pediatric Intensive Care Unit [PICU], and Neonatal Intensive Care Unit [NICU]) and outpatient services (Pediatric Day Care/Short-Stay Unit and Pediatric Emergency Room) at a University Hospital in the western region of Saudi Arabia.

2.2 Sample Collection

Convenience sampling was utilized to identify pediatric nurses from the pediatric units Convenience sampling is a non-probability sampling technique in which participants are selected based on their availability, accessibility, and willingness to take part in the study [21]. This strategy was chosen because it was appropriate for reaching the target population directly during working hours. Participants were required to be registered nurses currently employed in pediatric units, have at least six months of clinical experience, and be willing to participate. The sample size was determined using G*Power (v3.1) for Pearson correlation (two-tailed, $\alpha = 0.05$, power = 0.80, $r = 0.30$), yielding a minimum of 84 participants. Considering non-response, the target sample was set at approximately 100 nurses. All responses were kept confidential and anonymous, and each participant provided informed consent prior to participation.

2.3 Instrumentations/Data collection methods

Communication assessment tools are essential in healthcare research as they provide structured ways to evaluate how healthcare professionals interact with patients and families [22]. Data were collected using an electronic, self-administered questionnaire comprising two tools:

Demographic Survey: This section collected participants' age, marital status, gender, education level, years of pediatric nursing experience, current unit of assignment, experience with children who have communication difficulties, and prior communication training.

Health Professionals Communication Skills Scale (HP-CSS): The HP-CSS is a validated self-report instrument designed to assess communication skills among healthcare professionals across four domains: empathy, informative communication, respect, and social skills. This scale has demonstrated strong construct validity and good internal consistency [23]. Permission for the use and adaptation of the tool was obtained via email from the original authors. The scale was modified to reflect communication dynamics with pediatric patients and their caregivers.

2.4 Analytical Methods

Data were summarized using descriptive statistics, including the means, standard deviations, and percentages. Multiple linear regression was conducted to examine factors associated with communication scores. All analyses were performed using SPSS, with a p-value of < 0.05 considered statistically significant.

3. RESULTS AND DISCUSSION

3.1 Participant Characteristics

A total of 113 pediatric nurses participated in this study. The majority of participants were aged 35–39 years (32%), followed by those aged 40–44 years (22%) and 50 years and above (19%). All the participants were females (100%). Most were married (89%), while 11% were single. Regarding educational level, 52% held a diploma, 46% had a bachelor's degree, and 1.8% held a master's degree. In terms of professional experience, the majority had 10 years or more of experience (57%).

Participants were distributed across various pediatric units, with the largest proportions working in the Medical Pediatric Unit (31%) and the Surgical Pediatric Unit (25%), followed by the NICU (12%) and the Pediatric Emergency Room (11%). The other units represented smaller proportions.

Most participants reported receiving formal education or training related to communication (62%), and 65% had received workplace training. Additionally, 65% indicated a need for further training.

With respect to sign language proficiency, 41% reported a basic level, 35% reported no knowledge, 21% had a moderate level, and only 2.7% reported an advanced level.

3.2 Reliability Analysis

Table 2 illustrates that the internal consistency of the communication skills scale was high. Cronbach's alpha was 0.84, indicating good reliability of the scale. The average inter-item correlation was 0.27, suggesting acceptable item homogeneity. The 95% confidence interval for Cronbach's alpha ranged from 0.80 to 0.88.

Furthermore, Item-level analysis showed that deleting any individual item did not result in a substantial improvement in the overall reliability, with alpha values ranging between 0.82 and 0.87. Although two negatively worded items (items 16 and 18) were reverse-coded, they remained slightly less consistent with the overall scale. However, they were retained due to their conceptual importance and minimal impact on overall reliability.

3.3 Item-level Analysis

The mean scores of the communication skills items were categorized into three levels based on a 5-point Likert scale. Scores less than 2.5 were considered low, scores between 2.5 and less than 3.5 were considered moderate, and scores equal to or greater than 3.5 were considered high. This classification was used to facilitate the interpretation of the results.

Overall, the highest-scoring domain was empathy (M=3.77,SD=0.59), closely followed by respect (M=3.76,SD=0.58) and Informative Communication (M=3.53,SD=0.61), all operating at a high level. In contrast, the Social Skills and Assertiveness domain scored at a moderate level (M=3.33,SD=0.67), reflecting targeted areas for skill enhancement.

Table 3 shows that the item-level analysis of the communication skills scale showed that the majority of items were rated at a high level, with mean scores ranging from 3.54 to 3.85. The highest mean score was observed for "I feel that I respect the needs of patients" (M = 3.85, SD = 0.64), followed closely by items related to respecting patients' rights and understanding their needs.

Most items reflecting core communication competencies—such as active listening, respect for patient autonomy, clarity in providing information, and empathy—demonstrated high mean scores, indicating a generally strong level of communication skills among the participants.

However, three items were classified as moderate. These included "When a patient does something that does not seem right, I express my disagreement or discomfort" (M = 3.06, SD = 1.04), and two negatively worded (reversed) items: ""I find it difficult to meet the requests of patients" (M = 2.85, SD = 1.11) and "I find it difficult to ask for information from patients" (M = 3.20, SD = 1.14). These findings suggest some challenges in assertiveness and information-seeking behaviors during patient interactions.

Overall, the results indicate that while communication skills are generally high, specific aspects related to assertiveness and initiating communication may require further attention in training programs.

3.4 Factors Associated with Communication Skills

Table 4 presents the results of the multiple linear regression conducted to examine factors associated with pediatric nurses' communication skills. Gender was excluded from the model as all participants were female. The overall model approached the conventional threshold for statistical significance ($F = 1.54$, $p = 0.05$) and explained 36.0% of the variance in communication skills scores ($R^2 = 0.36$); however, the markedly lower adjusted R^2 (0.13) suggests the model may be overfitted given the number of predictors relative to the sample size, and results should be interpreted with caution.

Among the variables included in the model, age was the only factor significantly associated with communication skills. Participants aged 35–39 years ($\beta = 0.66$, 95% CI [0.00, 1.3], $p = 0.049$) and those aged 45–49 years ($\beta = 0.99$, 95% CI [0.21, 1.8], $p = 0.014$) had significantly higher communication scores compared to the reference group (aged 25–29).No statistically significant associations were observed for marital status, nursing qualification, years of experience, pediatric unit, formal education/training, need for additional training, or sign language level (all $p > 0.05$).

Table 1: Descriptive Characteristics of the Study Participants

Characteristic	**N = 113**[1]
Age	
25–29 years	7 (6.2%)
30–34 years	19 (17%)

Characteristic	N = 113[1]
35–39 years	36 (32%)
40-44 years	25 (22%)
45-49 years	5 (4.4%)
50 years and above.	21 (19%)
Gender	
Female	113 (100%)
Marital status	
Married	101 (89%)
Single	12 (11%)
Nursing qualification	
Bachelor's degree	52 (46%)
Diploma	59 (52%)
Master's degree	2 (1.8%)
experience	
1-3 years	8 (7.1%)
10 years and above	64 (57%)
4-6 years	21 (19%)
7-9 years	20 (18%)
Pediatric unit	
Medical Pediatric Unit	35 (31%)
NICU	13 (12%)
Nursery	3 (2.7%)
PCICU	9 (8.0%)
Pediatric Day Care / Short-Stay Unit	4 (3.5%)
Pediatric Emergency Room	12 (11%)
PICU	9 (8.0%)
Surgical Pediatric Unit	28 (25%)
Formal education training	70 (62%)
Workplace training	74 (65%)
Need additional training	73 (65%)
Sign language level	
Advanced	3 (2.7%)
Basic	46 (41%)
Moderate	24 (21%)
None	40 (35%)
[1]n (%)	

Table 3: Item-Level Descriptive Analysis of Communication Skills Scale

Item	Question	Mean	SD	Level
Item 1	I respect the right of patients to express themselves freely.	3.84	0.75	High
Item 2	I explore the emotions of my patients.	3.54	1.02	High
Item 3	I respect the autonomy and freedom of patients.	3.72	0.76	High

Item	Question	Mean	SD	Level
Item 4	When the patient speaks, I show interest through body gestures (nodding, eye contact, smiles, ...).	3.73	0.75	High
Item 5	I provide information to patients (whenever my professional competency permits me) about what concerns them.	3.69	0.96	High
Item 6	I listen to patients without prejudice, regardless of their physical appearance, mannerisms, form of expression, …	3.78	0.80	High
Item 7	I express my opinions and desires clearly to patients.	3.66	0.92	High
Item 8	When I give information, I use silence to allow the patient to assimilate what I am saying.	3.58	0.95	High
Item 9	When I give information to patients, I do so in understandable terms.	3.69	0.88	High
Item 10	When a patient does something that does not seem right, I express my disagreement or discomfort.	3.06	1.04	Moderate
Item 11	I dedicate time to listen and try to understand the needs of patients.	3.84	0.78	High
Item 12	I try to understand the feelings of my patient.	3.82	0.79	High
Item 13	When I interact with patients, I express my opinions clearly and firmly.	3.76	0.84	High
Item 14	I believe that the patient is entitled to receive health information.	3.76	0.74	High
Item 15	I feel that I respect the needs of patients.	3.85	0.64	High
Item 16	I find it difficult to meet the requests of patients. (reversed)	2.85	1.11	Moderate
Item 17	I make sure that patients have comprehended the information provided.	3.55	0.88	High
Item 18	I find it difficult to ask for information from patients. (reversed)	3.20	1.14	Moderate

Table 4: Factors Associated with Pediatric Nurses' Communication Skills Score: A Multivariable Linear Regression Analysis

Characteristic	**Beta**	**95% CI**	**p-value**
age			
25–29 years	—	—	
30–34 years	0.62	-0.04, 1.3	0.066
35–39 years	0.66	0.00, 1.3	**0.049**
40-44 years	0.42	-0.27, 1.1	0.2
45-49 years	0.99	0.21, 1.8	**0.014**
50 years and above.	0.50	-0.21, 1.2	0.2

Characteristic	Beta	95% CI	p-value
marital status			
Married	—	—	
Single	0.18	-0.27, 0.62	0.4
nursing qualification			
Bachelor's degree	—	—	
Diploma	-0.13	-0.33, 0.07	0.2
Master's degree	0.01	-0.67, 0.70	>0.9
experience			
1-3 years	—	—	
10 years and above	0.06	-0.40, 0.52	0.8
4-6 years	0.06	-0.38, 0.51	0.8
7-9 years	-0.22	-0.70, 0.27	0.4
pediatric unit			
Medical Pediatric Unit	—	—	
NICU	0.17	-0.13, 0.47	0.3
Nursery	-0.44	-1.0, 0.13	0.13
PCICU	0.24	-0.10, 0.59	0.2
Pediatric Day Care / Short-Stay Unit	-0.09	-0.57, 0.39	0.7
Pediatric Emergency Room	0.09	-0.23, 0.40	0.6
PICU	-0.03	-0.40, 0.33	0.9
Surgical Pediatric Unit	-0.14	-0.37, 0.10	0.2
formal_education_training			
No	—	—	
Yes	-0.01	-0.20, 0.19	>0.9
need_additional_training			
No	—	—	
Yes	0.15	-0.05, 0.34	0.14
sign_language_level			
Advanced	—	—	
Basic	-0.28	-0.85, 0.30	0.3
Moderate	-0.37	-0.95, 0.21	0.2
None	-0.13	-0.71, 0.46	0.7
Abbreviation: CI = Confidence Interval			

DISCUSSION

This study investigated the communication skills of pediatric nurses at King Abdulaziz University Hospital using the HP-CSS. The results indicate that nurses demonstrated high communication competence, particularly in empathy, respect, active listening, and the provision of clear information to children and their caregivers. Nonetheless, certain dimensions of assertive communication were comparatively less developed, notably in contexts requiring the expression of disagreement, requests for clarification, or the initiation of difficult conversations. Furthermore, age was the sole factor significantly associated with communication scores, whereas formal communication training, years of professional experience, and language were not significantly associated with overall communication competence.

The consistently high communication scores found in this study align with the inherent demands of pediatric nursing practice. Communication within pediatric settings extends beyond direct interaction with the child and necessitates ongoing engagement with caregivers, who play a crucial role in decision-making and emotional support. Pediatric

nurses are required to communicate in ways that are emotionally supportive, developmentally appropriate, and centered on the family unit. These demands likely account for the strong performance observed in areas related to empathy, active listening, and respectful interactions. Comparable findings have been documented in previous research, where effective communication in pediatric care has been linked to enhanced caregiver trust, reduced anxiety, and improved involvement in the child's care process [4,7]. Moreover, the present findings are consistent with the original HP-CSS validation study, which reported high scores for empathy and informative communication among healthcare professionals [23].

Despite the overall high communication scores, the study identified a relatively lower performance in assertiveness-related communication behaviors. Nurses reported greater difficulty expressing disagreement, requesting information, or addressing situations that require a firmer communicative approach. This finding is significant, as assertive communication is integral to patient advocacy, error prevention, and maintaining safe clinical practice. In pediatric environments, nurses regularly face emotionally charged scenarios involving anxious caregivers, treatment disagreements, or concerns regarding a child's well-being. Effectively managing these situations requires communication that is both compassionate and assertive, characterized by clarity and confidence.

These findings are consistent with previous research, indicating that assertiveness continues to present challenges in nursing communication. For example, [19] observed that communication gaps among pediatric nurses correlated with suboptimal patient safety outcomes, especially in situations requiring escalation or clarification. Similarly [24] reported that while many nurses excel in interpersonal and empathetic communication, they may still struggle with direct or confrontational exchanges. In the context of the current study, nurses may have felt more at ease maintaining supportive relationships with caregivers than engaging in communication that was deemed confrontational or uncomfortable. This tendency may also reflect broader cultural and professional norms in healthcare, where the preservation of harmonious relationships is often prioritized.

Another important finding was the association between age and communication skills. Nurses aged 35–39 and 45–49 years appeared to exhibit significantly higher communication scores than their younger counterparts. Notably, years of professional experience alone did not show a significant association with communication competence. This observation suggests that communication skills may be influenced by a combination of personal maturity, emotional regulation, professional confidence, and cumulative interpersonal exposure, rather than by clinical experience alone. Similarly, [25] reported positive associations among communication competence, self-efficacy, and professional maturity in nurses. Consequently, older nurses may possess greater confidence in navigating complex caregiver interactions and managing emotionally challenging situations than younger nurses.

The findings also highlight an important gap related to communication accessibility. More than one-third of the participants reported no knowledge of sign language, while only a very small number demonstrated advanced proficiency. This is particularly relevant in pediatric care, where communication may be complicated by developmental stage, fear, illness, or disability. Children with hearing impairments or communication difficulties often require alternative communication strategies to ensure safe and effective care. Previous Saudi studies have reported similar findings, showing limited preparedness among healthcare professionals in communicating with deaf and hearing-impaired patients [16]. The results of the current study, therefore, point to the need for greater attention to inclusive communication training within pediatric nursing education and practice.

Implications

Interestingly, formal communication education and workplace communication training were not significantly associated with communication scores, despite the majority of nurses reporting previous exposure to training programs. This finding may suggest that current communication education focuses more on theoretical content than on practical communication performance in real clinical situations. Pediatric communication is often complex and emotionally demanding, particularly when interacting with distressed caregivers or children with special communication needs. General communication lectures alone may therefore be insufficient to prepare nurses for these situations.

The fact that many nurses reported a need for additional communication training supports this interpretation. Previous studies have shown that experiential approaches, including simulation, role-playing, standardized patient scenarios, and structured communication exercises, are more effective than traditional lecture-based teaching alone in improving communication confidence and assertiveness [14,26,27]. Mentorship and guided clinical exposure may also play an important role in helping younger nurses develop confidence in challenging communication situations.

This study adds to the limited body of research examining pediatric nurses communication skills in Saudi Arabia using a validated assessment tool. The findings provide useful baseline evidence regarding both strengths and gaps in pediatric communication practice. In particular, the study highlights that while pediatric nurses demonstrate strong empathetic and respectful communication behaviors, additional support may be needed in areas such as assertiveness, communication accessibility, and managing complex caregiver interactions.

Limitations

Several limitations should be considered when interpreting the findings of this study. The study was conducted in a single hospital setting using convenience sampling, which may limit the generalizability of the findings to other healthcare institutions. In addition, communication skills were measured using a self-reported questionnaire, which may have been influenced by social desirability bias. The cross-sectional design also limits the ability to determine any causal relationships between variables. Furthermore, factors such as workload, staffing levels, stress, organizational culture, gender, and language differences were not explored and may have influenced communication practices. Although all participants in this study were female, this reflects the staffing pattern within the pediatric units included in the study, where no male nurses were employed during the data collection period.

Future studies should include nurses from multiple healthcare institutions and different regions of Saudi Arabia to provide a broader understanding of pediatric communication practices. It may also be valuable to use observational or mixed-method approaches to explore how communication skills are applied in real clinical interactions with children and caregivers. Additional research examining communication challenges among children with developmental, hearing, or cognitive impairments would also provide important evidence to improve inclusive pediatric care.

4. CONCLUSION

In conclusion, pediatric nurses in this study demonstrated generally strong communication skills, particularly in empathy, listening, and respectful interaction with children and caregivers. However, gaps remain in assertive communication and communication preparedness for children with special communication needs. The finding that age was associated with communication competence suggests that communication development may be influenced more by maturity and professional confidence than by formal training alone. Strengthening practical, experience-based communication training may help further improve communication quality and support safer, more family-centered pediatric care.

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AUTHOR CONTRIBUTIONS

Maha Alzahrani: Conceptualization, methodology, data analysis, writing, research supervision, and manuscript review and revision. Mayar Alsaigh: Student team leadership, research coordination, data collection, literature review, and writing of the results and discussion. Ghazal Aljehni: Data collection, literature review, and writing of the results and discussion. Hanan Midad: Data collection, literature review, and writing of the results and discussion. Najat Alharbi: Data collection, literature review, and writing of the results and discussion. Salmah Alghamdi: Interpretation of data, writing, critical manuscript review, and substantive intellectual revision. All authors read and approved the final version of the manuscript and agreed to its submission.

CONFLICT OF INTEREST

The authors declare that they have no known competing financial interests or personal relationships that could have influenced the work reported in this manuscript.

ETHICS STATEMENT

The study received ethical approval from the Faculty of Nursing (FON) at King Abdulaziz University (KAU) (IRB Ref. No. 2B.62) on December 12, 2025. Participant recruitment and data collection were conducted electronically following ethical approval. All participants were registered nurses who provided electronic informed consent before participating. Participation was voluntary, and confidentiality and anonymity were maintained throughout the research process.

DATA AVAILABILITY STATEMENT

The data supporting the findings of this study are available from the corresponding author upon reasonable request, subject to applicable ethical and institutional requirements to ensure participant confidentiality.

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