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Family Communication as A Motivational Mechanism for Deaf Children's Learning in Indonesia: A Qualitative Case Study in Tegal

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Abstract. Family communication is increasingly recognized as a critical factor in supporting the learning motivation of deaf children, yet empirical studies examining how communication strategies function within the family as a primary learning environment remain limited, particularly in developing-country contexts. This study explores the forms of family communication strategies employed by parents of deaf children, the enabling and constraining factors shaping their implementation, and their implications for children's learning motivation and engagement. Adopting a qualitative case study design, data were collected through in-depth interviews and participant observation involving two mothers of deaf children in Tegal Regency, Indonesia. The findings reveal that parents employ a range of adaptive communication strategies, including sign language, total communication, visual media, body gestures, eye contact, and assistive hearing devices, to facilitate learning interactions at home. These strategies appear to be most effective when accompanied by emotional support, consistent parental involvement, positive reinforcement, and a supportive learning atmosphere, which together contribute to children's confidence, participation, and persistence in learning activities. However, economic constraints, limited access to therapeutic and educational support services, and disparities in sign language proficiency pose significant challenges to the sustainability of effective family communication practices. The findings further suggest that responsive, child-centered, and context-sensitive family communication strategies function not only as instructional tools but also as motivational mechanisms by making learning accessible, creating psychological safety, reinforcing participation, and establishing consistent learning routines. The study underscores the central role of families in inclusive education and offers implications for the development of family-centered interventions, parent training, and supportive policies aimed at strengthening educational participation and learning outcomes among deaf children.

Keywords: *Deaf Children; Family Communication; Inclusive Education; Learning Motivation; Parental Involvement*

INTRODUCTION

Deaf children encounter educational conditions in which access to information is closely connected to access to communication. The difficulty is therefore not adequately described as a problem of hearing alone. When instructional information is delivered predominantly through speech, children who cannot access that channel require alternative routes through which meaning, instructions, feedback, and social cues become available [3]. Research on deaf education has consistently emphasized the importance of parental involvement, early intervention, and consistent stimulation in overcoming communication barriers [1], [4], [6]. Recent evidence also indicates that parental involvement and learners' self-efficacy are significantly associated with learning motivation among students with hearing impairment, although the strength and form of that relationship depend on context and available resources [1].

The family is particularly important because learning extends beyond the formal classroom. At home, parents decide how instructions are repeated, how difficult material is represented, how mistakes are responded to, and whether the child experiences learning as a demanding obligation or as a manageable and supportive activity. Earlier research has shown that parental communication competence can be closely related to language and academic development in deaf children [17]. Contemporary work similarly identifies parents as key agents in deaf education and emphasizes two-way home-school communication, although effective collaboration is not always easy to establish [2], [5]. Thus, family communication should be considered an educational process rather than merely a domestic interaction.

Communication with deaf children is inherently multimodal. Studies of gesture, sign language, and total communication demonstrate that meaning is constructed through combinations of linguistic and non-linguistic resources [10], [15], [16]. The present study is important in this regard because the families in

Tegal do not appear to select one communication system exclusively. Instead, parents move dynamically between spoken language, lip reading, sign language, gestures, visual materials, and hearing-support devices according to the child's immediate needs. Such flexibility raises a further question: what makes communication motivational? A child may understand a message, but understanding alone does not explain why the child remains willing to study, asks for clarification, persists after failure, or follows a learning routine.

The motivational dimension can be interpreted through the quality of the interaction created by communication. Self-determination theory proposes that motivation is strengthened when social environments support competence, autonomy, and relatedness [18]. Although the present study was not designed as a formal quantitative test of this theory, its principles provide a valuable interpretive lens. When parents make information accessible, children have greater opportunity to experience competence; when parents invite questions and avoid excessive pressure, children have more room for agency; and when parents communicate with warmth and acceptance, children experience relatedness. The significance of family communication may therefore lie not simply in the communication code itself, but in the interactional conditions that the code makes possible.

The novelty of this study lies in explaining family communication not simply as general parental involvement, but as a relational mechanism through which communication access is converted into learning participation and, potentially, sustained motivation. Whereas prior work has established associations between parental involvement, communication competence, and educational outcomes [1], [17], the present cases illuminate the intermediate interactional processes: parents first make learning accessible, then create a psychologically safe space for clarification, reinforce participation, and stabilize learning through routines and home-school continuity. This process-oriented interpretation is particularly relevant in resource-constrained contexts, where family agency and structural limitations coexist.

Despite this relevance, the literature largely emphasizes isolated communication techniques, parenting styles, or language acquisition in formal school settings. Less attention is given to the qualitative process through which everyday family communication is connected to motivation and consistency in home learning. This study addresses that gap through a contextual case study of two families in Tegal Regency, Indonesia. It addresses three research questions: (1) What communication strategies do families use to support deaf children's learning? (2) What factors support or constrain the implementation of these strategies? and (3) How do these strategies shape learning enthusiasm, confidence, and consistency as experienced and observed by the participating families? The contribution of the study is therefore not a claim of causal effect, but an explanatory analysis of the mechanisms through which everyday communication practices become motivational resources in home learning.

METHODS

Study area and Research Design

This study employed a qualitative approach with a case study design. The design was selected because the research questions concerned communication practices as they occur in the everyday context of family life rather than under controlled conditions. The case was bounded geographically in Tegal Regency, Central Java, Indonesia—a semi-urban region characterized by diverse socioeconomic conditions and varying access to specialized special-education and therapeutic facilities—and substantively around family communication used to support the learning of deaf children. A case-oriented approach made it possible to examine communication choices, emotional responses, learning routines, and family-school coordination as interconnected practices.

The study involved two mothers of deaf children, identified as NM and RWN. NM was interviewed in Mejasem Village, Tegal, and RWN in Harjosari Lor, Tegal, on 8 November 2025. The focused number of participants is consistent with an in-depth case study orientation, prioritizing depth of contextual insight over statistical transferability. The study should therefore be read as an analytical account of situated family practices rather than a statistical representation of all families of deaf children in Indonesia.

Participants and Data Collection

Primary data were obtained through direct observation and in-depth interviews. Observation focused on family communication patterns, the home-learning atmosphere, parent-child interaction, and the ways parents adapted communication during learning. Interviews explored parents' experiences of communicating with their children, the strategies they used, the resources they relied upon, challenges they encountered, and their approaches to motivating children. The interview material included concrete examples of communication practices, such as the use of sign language, gestures, visual materials, hearing aids, learning schedules, rewards, and communication with teachers.

Interview excerpts are reported using the participant codes NM and RWN. Quotations are translated into English for publication while retaining the substantive meaning of the participants' statements. Because qualitative credibility depends on a transparent relationship between data and interpretation, the results below distinguish participants' accounts from the researchers' analytical interpretation. The combination of interview and observation data also provides contextual support for interpreting the reported practices. Reporting of qualitative interviews benefits from explicit description of sampling, setting, data collection, analytic procedures, theme development, and supporting quotations [19]; these principles guided the organization of the present report.

The study also drew on secondary literature to contextualize the empirical findings. The literature was not treated as evidence about the two families themselves; rather, it was used to compare the observed practices with previous research on deaf education, family communication, parental involvement, positive reinforcement, and home-school collaboration.

Data analysis

Data analysis followed the Miles and Huberman procedure described in the source manuscript: data reduction, data display, and conclusion drawing or verification. First, interview and observation material was reduced by organizing statements around the three research questions. Second, the reduced data were displayed narratively and compared across the two participants to identify recurrent patterns and meaningful differences. Third, conclusions were drawn by examining relationships among communication accessibility, emotional climate, learning routines, reinforcement, resource constraints, and learning engagement.

Analytically, the findings were organized into six connected themes: (1) adaptive multimodal communication; (2) relational safety and dialogic learning; (3) positive reinforcement and structured routines; (4) home-school alignment; (5) structural constraints and parental agency; and (6) emotional regulation and variation in sign-language competence. A final integrative analysis then examined how these themes could explain the motivational role of family communication. This approach avoids treating each communication technique as an isolated intervention and instead examines the sequence through which communication may support continued participation.

RESULTS AND DISCUSSION

The findings indicate that the two families used communication as a flexible system of access, relationship building, instructional support, and motivation. The most important analytical point is that no single strategy operated independently. Communication became motivational when several practices worked together: making information accessible, creating emotional safety, structuring learning, reinforcing effort, and connecting home learning with school. The themes below explain this process in detail.

Adaptive Multimodal Communication as Access to Learning

The first and most consistent finding is the use of multimodal communication. NM reported combining spoken language with clearer lip movements, sign language, close physical distance when using a hearing aid, eye contact, body movement, and other visual supports. She explained that the family changed the mode according to what the child could understand most easily. RWN similarly reported using sign language together with facial and bodily gestures because sign language alone was sometimes insufficient for the child to interpret the intended meaning. These accounts show that communication was treated as an adaptive problem: when one channel did not provide sufficient access, the family added another channel.

The significance of this finding lies in the shift from a 'method-centered' to a 'child-centered' understanding of communication. A method-centered approach would ask whether spoken language, sign language, or total communication is the best method. The cases in Tegal instead suggest that effectiveness depends on the interaction between the communication mode and the child's immediate needs. This interpretation is consistent with studies emphasizing gesture-based and total communication practices for deaf learners [10], [15], [16]. It also corresponds with contemporary deaf education research showing that parents are central agents in negotiating linguistic and educational resources across home and school contexts [2].

More importantly, the multimodal repertoire appears to create a pathway toward learning participation. If a child cannot access an instruction, the immediate consequence is not simply a communication failure; it may also be a missed opportunity to respond, practice, receive feedback, and experience success. Conversely, when the parent modifies the message until it becomes understandable, the child is given an opportunity to participate. In this sense, accessibility can be interpreted as a precondition for motivational experience. The evidence does not demonstrate a causal effect, but the participants' accounts suggest a

plausible sequence: accessible communication reduces misunderstanding, reduced misunderstanding facilitates participation, and repeated participation can support confidence and willingness to continue.

This interpretation is especially important because deaf children should not be positioned as passive recipients who must adapt entirely to the communication habits of hearing adults. In the present cases, adaptation is reciprocal: parents learn sign language, adjust visual cues, change distance, repeat information, and use objects or pictures. Such reciprocal adaptation is consistent with the broader argument that parental communication skills matter for children's language and educational development [17]. The family is therefore functioning as a communication-learning environment in which parents themselves are also learners.

A Relationally Safe and Dialogic Home-Learning Environment

The second theme concerns the emotional quality of communication. Both mothers described deliberate efforts to make learning at home relaxed, non-threatening, and equal. NM reported using sign language, body gestures, and pictures while avoiding pressure. RWN described sitting at the same table with the child so that the child felt 'accompanied, not supervised.' She also asked questions such as whether there was anything confusing or which part needed to be repeated. These practices indicate that the parents were not simply delivering material; they were creating an interactional space in which the child could reveal difficulty.

This finding is analytically important because interpersonal communication regulates the social meaning of failure [14]. In a highly directive interaction, not understanding a lesson may be interpreted by the child as personal inadequacy. In a dialogic interaction, the same difficulty is interpreted as feedback that the explanation needs adjustment. The parents' practice of repeating material, using concrete objects, and asking what remained unclear shifts responsibility from 'the child must understand' toward 'the interaction must become understandable.' This relational orientation protects the child's self-efficacy and willingness to participate.

The finding also resonates with research on parent-child communication and social-emotional development in deaf children, which emphasizes that effective communication is related to broader developmental processes, not merely the transfer of linguistic information [17]. Recent work further suggests that family engagement in deaf education includes relational practices, communication with educators, and support that extends across home and school settings [1], [2]. The Tegal cases add a micro-level explanation: relational support is enacted through very ordinary behaviors—sitting together, asking questions, repeating information, using a calm tone, and avoiding humiliation when the child makes mistakes.

The relationship with motivation becomes clearer when the interaction is viewed through competence and relatedness. Self-determination theory identifies competence, autonomy, and relatedness as basic psychological needs relevant to motivation [18]. The present data do not measure these constructs directly, so they should not be interpreted as a formal test of the theory. Nevertheless, the observed practices plausibly support competence by making tasks understandable and relatedness by communicating acceptance and availability. The child's willingness to disclose confusion is particularly significant: asking for help is itself a form of learning participation. Thus, the motivational contribution of family communication may begin before the child performs an academic task; it begins when the child believes that difficulty can be communicated safely.

Positive Reinforcement and Structured Routines: from Immediate Encouragement to Learning Consistency

A third theme is the combination of positive reinforcement and predictable routines. NM explained that when the child reached a learning target or experienced difficulty, the family sometimes provided appreciation or a reward, including activities the child enjoyed. RWN similarly described using things the child liked as a bridge to encourage learning. Both mothers also described daily schedules that organized learning, play, household activities, and rest.

The important point is that reinforcement was not reported as an isolated reward system. It was embedded within communication. Parents communicated expectations, clarified targets, acknowledged effort, and then used appreciation to strengthen desired behavior. The motivational function therefore appears to operate through feedback. A child receives information about what has been achieved, experiences recognition, and is encouraged to repeat the behavior. Research on positive reinforcement and learning motivation supports the usefulness of praise and rewards when they are applied appropriately [7], [11]. However, the present cases also show why reinforcement should be interpreted cautiously. Reward can encourage short-term engagement, but sustained learning requires routines and meaningful interaction rather than dependence on external rewards alone.

The daily schedule provides the second component. Both families described arranging activities in a structured sequence. This routine transforms learning from an event that depends entirely on momentary willingness into a predictable part of everyday life. Predictability may be particularly useful when communication itself requires additional time and repetition. Instead of repeatedly negotiating whether learning will occur, the family establishes a routine in which learning has a recognizable place.

This finding helps explain the study's emphasis on 'consistency.' Consistency is not simply the frequency with which parents ask children to study. It is the stability of the communication-learning environment. When expectations, communication modes, schedules, and forms of feedback are relatively predictable, the child can devote more attention to the learning task rather than continuously interpreting what the interaction requires. This interpretation is consistent with the source study's observation that structured routines accompanied by positive reinforcement were perceived to support discipline and sustained learning [7], [11].

At the same time, one finding deserves critical attention: RWN described comparing the child with peers who had achieved higher performance as a way to stimulate motivation. Although social comparison can sometimes increase effort, it may also produce pressure or diminish self-worth if used repeatedly or negatively. Therefore, the present finding should not be generalized as a universally recommended strategy. A more defensible interpretation is that parents attempt to provide a reference point for achievement, but the motivational effect depends on whether comparison is experienced as encouragement or as judgment. This nuance is important for inclusive education because motivation should not be built at the cost of the child's psychological safety.

Home-School Alignment as A Continuity Mechanism

The fourth theme is the alignment between home and school. NM reported communicating with teachers through WhatsApp groups and communication books. RWN described first examining the child's school materials and communicating with the teacher before repeating the material at home. The purpose was not merely to know what the child had learned but to reproduce or adapt the instructional approach so that the child encountered greater continuity between settings.

This finding expands the meaning of family communication. Communication is not confined to parent-child interaction; it also includes parent-teacher coordination. In the Tegal cases, the family acts as a bridge between two learning environments. Parents gather information from teachers, translate it into home-learning activities, and then check whether the child has understood the material. Such coordination can reduce discontinuity in instruction and prevent the child from encountering conflicting explanations or expectations.

Recent research on deaf and hard-of-hearing multilingual learners similarly emphasizes the importance of home-school collaboration and identifies two-way communication between parents and educators as a recurring condition of effective educational support [2]. Broader literature on home-school partnership also highlights the importance of sustained, reciprocal communication rather than one-way transmission of school information [5], [6]. The present findings provide a concrete example of how this principle operates in everyday practice: a WhatsApp message or communication book becomes an instructional coordination tool.

The home-school connection may also contribute to motivation through continuity. When parents understand what teachers are doing, they can reinforce the same learning target at home. When teachers understand how the child communicates at home, they may gain information that can inform classroom interaction. Although the current study did not include teacher interviews and therefore cannot establish reciprocal effects from the school side, the parents' accounts indicate that coordination is perceived as helpful.

This limitation is also analytically productive. The findings suggest that family communication should not be conceptualized only as a private responsibility. When access to sign-language instruction, hearing-support technology, therapy, or adapted learning materials is uneven, the family's ability to support learning is partly dependent on the responsiveness of the wider educational system. Home-school communication can therefore function as a mechanism for pooling information and compensating, at least partially, for fragmented support.

Structural Constraints Do Not Eliminate Parental Agency, But They Shape What Is Possible

The fifth theme concerns the tension between commitment and structural constraint. Both mothers identified the cost of hearing aids and therapy as major challenges. NM also described the distance to therapy services and the difficulty of maintaining consistent intervention when financial or physical barriers arise. RWN similarly emphasized the expense of hearing-support equipment and therapy. These findings

indicate that communication strategies cannot be separated from the material conditions under which families implement them.

The analytical significance of this finding is that parental 'motivation' should not be used to individualize responsibility for educational outcomes. The mothers repeatedly described personal commitment, but their ability to act is constrained by access to services and resources. Contemporary research on hearing impairment similarly identifies parental involvement as important while noting that socioeconomic resources and access to early intervention influence what parents are able to provide [1], [6], [8]. Thus, a family may be highly committed and still face conditions that limit the continuity or intensity of intervention.

At the same time, the cases show considerable parental agency. NM described using social media and parent communities to search for tutorials and share experiences. RWN reported using YouTube videos, BISINDO classes, and sign-language guides to learn communication techniques. These practices transform digital media from a passive entertainment resource into an informal professional-development space for parents [9]. The parents are effectively constructing their own learning networks when formal services are costly, distant, or insufficient.

This pattern is important for understanding family empowerment. The parents are not merely implementing strategies recommended by professionals; they are actively acquiring knowledge, testing communication approaches, and adjusting them to their children. Such agency is consistent with the broader finding that family involvement includes learning how to communicate effectively, collaborating with specialists, and accessing wider Deaf communities [1], [2]. Nevertheless, digital resources should not be romanticized as substitutes for professional services. Online materials may vary in quality, and families may need guidance in determining whether a communication strategy is appropriate for their child.

The findings therefore point toward a layered model of support. At the first layer, parents provide everyday communication and emotional support. At the second, schools and teachers provide pedagogical continuity. At the third, therapists and specialists provide technical intervention. At the fourth, community and digital resources expand parents' knowledge and social support. When these layers communicate with each other, the family's capacity to support learning is strengthened; when one layer is inaccessible, the burden shifts disproportionately to parents.

Emotional Regulation and Variation in Sign-Language Competence as Hidden Conditions of Communication Quality

A sixth finding concerns two less visible barriers: emotional regulation and uneven communication competence among family members. NM emphasized that deaf adolescents may be highly attentive to facial expressions and emotional states. She described situations in which parental discomfort or insufficient explanation could be perceived by the child and followed by emotional reactions. RWN, meanwhile, emphasized that parents need patience and must repeat messages. These accounts suggest that communication quality is affected not only by whether parents know a sign or gesture but also by whether they can regulate their own emotions while communicating. Parental emotional regulation is therefore a foundational prerequisite for positive parent-child interaction [12].

This is particularly significant because visual communication carries multiple layers of information simultaneously. Facial expression, eye contact, gesture, body orientation, and timing can communicate emotional meaning alongside the literal message. If a parent becomes frustrated while repeating an explanation, the child may receive two messages at once: the academic content and an emotional signal about the interaction. The source data suggest that the second message can influence the child's willingness to remain engaged.

The second issue is variation in sign-language competence. RWN described a situation in which the child encounters both a home-based sign system and BISINDO, while some family members do not fully understand the signs [2]. The problem is therefore not simply that the child has a communication difference; the family itself may contain different levels of linguistic competence. Such variation can create misunderstanding even when everyone is willing to communicate.

Recent deaf-education scholarship similarly emphasizes the complexity of multilingual and multimodal communication and identifies parents as important but sometimes underused resources in educational planning [2]. The Tegal cases add a family-level dimension: language consistency needs to be built collaboratively. Parents may need to learn the child's preferred signs, agree on shared meanings, and reduce unnecessary variation among family members. This is why parent learning is itself part of the communication strategy.

Taken together, emotional regulation and sign-language consistency reveal that communication effectiveness is relational and systemic. A technically appropriate communication mode can fail if the

emotional climate is tense; conversely, a warm relationship can still be limited if family members lack a shared communication repertoire. Effective family communication therefore requires both relational readiness and communicative competence.

An Explanatory Model: How Family Communication Becomes Motivational

Across the six themes, the study suggests a mechanism that can be represented as a five-stage process: communication accessibility → psychological safety → successful participation → reinforcement and routine → learning consistency. This model is an interpretive synthesis of the cases, not a tested causal model.

First, accessibility is established when parents adapt communication through signs, speech, gestures, visual materials, or hearing-support devices. Accessibility makes it possible for the child to understand what is being asked or taught [10], [15]. Second, psychological safety develops when parents communicate without humiliation, remain patient, sit with the child, and invite questions. The child can then disclose difficulty without anticipating negative judgment [14]. Third, successful participation occurs when the child is able to respond, complete a task, or demonstrate understanding [18]. Fourth, parents reinforce participation through appreciation, preferred activities, routines, and repeated practice [7], [11], [13]. Fifth, repeated experiences within a predictable routine can contribute to consistency.

The value of this model is that it explains why the study should not be reduced to a list of communication techniques. Sign language alone is not the motivational mechanism. Nor is a reward alone. Motivation emerges from the interaction among access, relationship, feedback, and routine. This interpretation is compatible with self-determination theory, particularly the relevance of competence and relatedness to motivated behavior [18], while also recognizing that the present study did not directly measure psychological needs [1], [2], [17].

The model also clarifies why structural barriers matter. If therapy is inaccessible or hearing-support devices cannot be obtained, the first stage—accessibility—may be weakened. If parents lack sign-language competence, accessibility becomes inconsistent. If financial or emotional stress reduces parents' capacity to remain patient, psychological safety may be compromised. If home and school use incompatible approaches, successful participation may become more difficult. Consequently, motivation is not solely an internal characteristic of the child; it is partly produced within an ecology of communication.

This interpretation aligns with recent quantitative evidence showing that parental involvement and self-efficacy are related to learning motivation among students with hearing impairment [1], but the present study contributes a different kind of evidence: it illustrates the everyday practices through which support is enacted. It also complements evidence that parental involvement does not automatically translate into academic achievement in every context [9]. What matters is the quality, accessibility, and contextual fit of involvement. The Tegal cases therefore caution against treating 'parental involvement' as a single variable. In practice, involvement consists of specific communicative, emotional, pedagogical, and coordinative actions whose effects may differ across children and circumstances.

Integrated Summary of Findings

Table 1 summarizes the main empirical patterns and the explanatory interpretation developed from the two cases:

Table 1. Integrated interpretation of family communication practices in the two Tegal cases.

Theme	Empirical practice	Immediate function	Potential motivational implication
Multimodal communication	Speech, lip reading, sign language, gestures, visual materials, hearing aids	Makes instructions and meanings accessible	Creates opportunities for successful participation and competence
Dialogic home learning	Calm atmosphere, sitting together, questions, repetition, non-threatening correction	Allows children to disclose difficulty	Strengthens safety, confidence, and willingness to seek help
Reinforcement and routine	Rewards, appreciation, preferred activities, daily schedules	Clarifies expectations and reinforces effort	Supports repeated engagement and learning consistency
Home-school alignment	WhatsApp, communication books, reviewing school materials	Maintains instructional continuity	Reduces confusion and supports coherent learning expectations
Parental agency	Learning BISINDO, tutorials, communities, self-directed adaptation	Expands family communication competence	Sustains support when formal resources are limited
Structural and emotional constraints	Therapy costs/distance, uneven sign competence, parental stress	Limits continuity and accessibility	Shows that motivation is partly shaped by the support ecology

Limitation

The study has several limitations that should shape interpretation. First, the empirical evidence comes from two mothers in one geographical context; the findings are therefore context-specific and should not be generalized statistically. Second, the study centers parents' perspectives and does not include systematic interviews with children, teachers, therapists, or other family members. Third, although observation and interviews were used, the source material does not report standardized measures of learning motivation, academic achievement, language proficiency, or communication competence. Consequently, statements about motivation and consistency represent qualitative interpretations of reported and observed patterns rather than measured causal effects. Fourth, the study does not compare families according to degree of hearing loss, type of hearing technology, or school placement. Future research should address these limitations through multiple-case designs, child and teacher perspectives, longitudinal observation, and, where appropriate, mixed-method measures of motivation and learning outcomes. In qualitative terms, the value of the cases therefore lies in analytical rather than statistical transferability: the proposed mechanism can generate propositions for comparison in other families, but its applicability should be tested against differences in age, degree and onset of hearing loss, communication mode, school placement, and family resources.

CONCLUSION

This study demonstrates that family communication functions as an essential motivational mechanism for deaf children's learning, operating as an integrated relational process rather than an isolated set of techniques. In the studied cases in Tegal Regency, mothers facilitated learning through adaptive multimodal communication, established psychological safety through dialogic interactions, fostered consistency through reinforcement and structured routines, and maintained continuity through home-school coordination. Furthermore, parents demonstrated active agency by acquiring sign-language and communication skills through digital resources when formal services were inaccessible.

The study contributes at two levels. Theoretically, it reframes parental communication as an interactional process rather than a background family variable. The findings suggest that the motivational significance of communication is mediated by accessibility, relatedness, feedback, and routine. Practically, the findings imply that parent training should include multimodal communication, emotion-sensitive interaction, positive feedback, structured home-learning routines, and procedures for two-way communication with teachers. Such support should be designed as part of an ecosystem rather than as an expectation placed on parents alone, because therapy access, technology costs, and professional support shape what families can realistically sustain.

The central contribution of the study is the explanatory connection between communication access and learning consistency. The findings suggest that children are more likely to remain engaged when communication makes learning understandable, the home environment makes difficulty safe to disclose, feedback recognizes effort, and routines make participation predictable. At the same time, these processes are conditioned by structural factors such as therapy accessibility, financial resources, hearing-support technology, parental time, and shared sign-language competence. Family responsibility should therefore be complemented by institutional and community support.

For educational practice, the findings imply that programs for families of deaf children should move beyond general advice to 'communicate more' and instead support parents in developing practical multimodal communication skills, emotional regulation, positive reinforcement, structured home-learning routines, and sustained coordination with teachers. Future research should examine these mechanisms across multiple families and include the voices of children, teachers, and professionals so that family communication can be understood as part of a wider inclusive education ecosystem.

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