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Original Article

Community Trust Barriers to Vaccine Uptake During Disease Resurgence: A Qualitative Descriptive Study

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ABSTRACT

Background: Family planning access in rural Sindh is shaped not only by service availability but also by gendered decision-making, household authority, contraceptive myths, privacy concerns, mobility restrictions, provider trust, and continuity of commodities. Qualitative evidence is needed to understand how women, men, frontline workers, and programme personnel perceive community-based family planning models and the conditions required for their acceptability and sustainability. Objective: To explore endline perceptions of a community-based family planning model involving Marvi workers, Marvi Markaz service points, and BiB-linked commodity access, with emphasis on barriers, facilitators, acceptability, and sustainability. Methods: An interpretative qualitative endline evaluation was conducted in selected intervention districts and villages of Sindh from 18 to 22 November 2024. Data were collected through in-depth interviews and focus group discussions with married women of reproductive age, men, Marvi workers, and district-level programme personnel. Transcripts and field notes were analyzed using thematic analysis, with attention to participant-group contrasts, implementation mechanisms, and trustworthiness through triangulation, reflexive memoing, audit trail, and direct quotation linkage. Results: The analysis identified interrelated themes around trust in Marvi workers, door-to-door counselling, Marvi Markaz as a safe and familiar service point, commodity availability, myths and fear of side effects, gendered household decision-making, elder influence, privacy and mobility constraints, worker capacity, and supervision/MIS for sustainability. Perceived acceptability was strongest when women experienced respectful counselling, confidentiality, safe access, and reliable commodities. Persistent barriers included misinformation, side-effect concerns, male or elder gatekeeping, restricted mobility, and dependence on continued worker support and supply-chain reliability. Conclusion: The model was perceived as acceptable through mechanisms of trust, proximity, privacy, and commodity access. Sustainability requires refresher training for Marvi workers, structured male engagement, privacy-sensitive service arrangements, reliable supplies, supportive supervision, and district-level ownership. Keywords: family planning; qualitative research; community health workers; Marvi workers; contraceptive access; Sindh; thematic analysis; reproductive health.

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INTRODUCTION

Family planning remains a central public health, gender equity, and development priority in Pakistan because contraceptive use, fertility preferences, service access, and reproductive decision-making are shaped not only by availability of commodities but also by household norms, gendered authority, myths, religious interpretation, provider trust, mobility constraints, and the perceived acceptability of services.

National survey data show that contraceptive uptake among married women of reproductive age has remained below policy aspirations, with the Pakistan Demographic and Health Survey 2017–18 reporting a contraceptive prevalence rate of approximately 34% and a total fertility rate of 3.6 births per woman, indicating a persistent gap between reproductive intentions, service access, and sustained method use (1). This gap is particularly important in relation to Pakistan's FP2030 commitments, including the goal of increasing contraceptive prevalence toward 50% by 2030, and to Sustainable Development Goal 3.7, which calls for universal access to sexual and reproductive health-care services, including family planning information, education, and integration into national strategies and programmes (2,3).

The public health challenge is not limited to the physical supply of contraceptive methods. In rural and underserved communities, women's use of family planning is often negotiated within marital relationships, extended family structures, community expectations, religious and cultural beliefs, and the everyday practicalities of reaching respectful, affordable, and reliable services. Previous evidence from Pakistan has shown that contraceptive non-use and discontinuation are influenced by concerns about side effects, fear of infertility or bodily harm, spousal approval, mother-in-law influence, low perceived need, provider behaviour, and uncertainty about method suitability (4,5). These determinants are difficult to understand through coverage indicators alone because they operate through meanings, relationships, power structures, trust, and lived service experiences. A qualitative approach is therefore necessary to examine how women, men, frontline workers, and programme managers interpret family planning services, what they perceive as acceptable or unacceptable, and which social and operational mechanisms influence uptake, continuation, referral, and sustainability.

Community-based health worker models have long been used in Pakistan to reduce geographic and social distance between households and the health system. The Lady Health Worker programme demonstrated the strategic value of door-to-door counselling, community embeddedness, referral, and basic reproductive health service delivery, although programme effectiveness has depended on training quality, supervision, commodity availability, workload, and trust in frontline workers (6). In Sindh, community-based family planning initiatives such as the Marvi worker and Marvi Markaz model build on similar principles by placing trusted female workers and localized service points closer to women who may otherwise face mobility restrictions, privacy concerns, lack of information, or limited access to contraceptive commodities. However, the endline value of such a model cannot be judged only by counting commodities distributed or clients reached. It also requires understanding whether women perceive the service as safe, respectful, confidential, and useful; whether men and household decision-makers view the model as acceptable; whether frontline workers feel equipped and supervised; and whether programme managers identify conditions needed for continuation after project support.

This study was guided by a qualitative SPIDER framework in which the sample comprised married women of reproductive age, men, Marvi workers, and district-level programme personnel; the phenomenon of interest was perceived access to, acceptability of, and experience with community-based family planning services and commodity availability; the design involved in-depth interviews and focus group discussions; the evaluation focused on perceived barriers, facilitators, mechanisms, and sustainability conditions at endline; and the research type was interpretative qualitative inquiry. Conceptually, the study also drew on PICo logic by examining the population exposed to or involved in the intervention, the interest in perceptions and implementation mechanisms, and the context of rural Sindh communities served through Marvi Markaz and BiB-linked commodity access. The objective of the study was to explore perceptions of the community-based family planning model among women, men, frontline workers, and programme managers; identify social, cultural, gendered, logistical, and service-related barriers and facilitators affecting access and acceptability; examine how trust, door-to-door counselling, safe spaces, and commodity availability shaped service experience; and generate pragmatic recommendations for sustainability, male engagement, worker support, supervision, and supply-chain strengthening.

MATERIALS AND METHODS

This study was designed as an interpretative qualitative endline evaluation using in-depth interviews and focus group discussions, analyzed through thematic analysis. The qualitative design was selected because the evaluation sought to understand perceptions, meanings, social negotiations, service experiences, and implementation mechanisms rather than estimate prevalence or test statistical associations. The study was conducted as an endline assessment of a community-based family planning model involving Marvi workers, Marvi Markaz service points, and BiB-linked commodity access in selected districts and villages of Sindh. Fieldwork was conducted from 18 to 22 November 2024. The reporting approach was informed by qualitative reporting standards for interviews and focus groups, including attention to study context, participant selection, researcher role, data collection procedures, analysis transparency, and trustworthiness (7,8).

Participants were purposively selected to represent the main groups directly involved in, exposed to, or responsible for the community-based family planning intervention. The sample included married women of reproductive age aged 16–49 years who were current users of family planning services or had direct service experience through the intervention, men from the same community context, Marvi workers involved in household counselling and linkage with services, and district-level programme personnel including District Programme Managers and District Population Welfare Department Officers. Purposive sampling was used to capture variation in participant role, gender, district, service experience, community perspective, and implementation responsibility. Recruitment prioritized participants who could provide information-rich accounts of awareness, acceptability, access, commodity availability, counselling quality, referral experience, household decision-making, and perceived sustainability of the Marvi Markaz and BiB-supported model. Community participants were approached through field coordination channels while maintaining voluntary participation and avoiding coercion, and programme participants were approached according to their implementation roles.

Eligibility for women required being married, aged 16–49 years, residing in the intervention catchment area, and having direct exposure to family planning counselling, commodities, referral, or services through the intervention. Men were eligible when they belonged to the intervention communities and were able to discuss household or community perspectives on family planning decision-making, acceptability, myths, gender roles, and support or resistance to service use. Marvi workers were eligible if they were actively engaged in community-based counselling, mobilization, referral, or commodity linkage under the model. Programme personnel were eligible if they were directly involved in planning, coordination, supervision, monitoring, commodity management, or district-level implementation. Participation was voluntary, and informed consent was obtained before data collection. Participants were informed about the purpose of the evaluation, the voluntary nature of participation, confidentiality measures, anonymity in reporting, and their right to decline or withdraw without effect on services or professional responsibilities.

Data were collected through semi-structured in-depth interviews and focus group discussions using guides developed around the evaluation objectives. The guides explored awareness and perceptions of family planning, experiences with Marvi workers and Marvi Markaz services, commodity access, counselling quality, myths and misconceptions, religious or cultural concerns, spousal and family influence, male engagement, privacy, safety, referral processes, supervision, supply issues, and perceived conditions for sustainability. Focus group discussions were used to understand shared community norms, collective perceptions, and group-level barriers and facilitators, while in-depth interviews were used to obtain detailed accounts from frontline workers, programme managers, and participants whose experiences required greater privacy or role-specific exploration. Focus group discussions were conducted in small groups appropriate for qualitative exploration, with attention to participant comfort, privacy, and separation of participant categories to reduce power imbalance and inhibition. Sessions were facilitated in the locally appropriate language, with probes used to clarify meanings, elicit examples, and explore differences between women's, men's, frontline workers', and programme managers' perspectives.

Data collection procedures were designed to protect confidentiality and encourage open discussion of sensitive reproductive health issues. Interviews and focus group discussions were conducted in private or

appropriately controlled locations where participants could speak without avoidable interruption or pressure from non-participants. Permission for audio recording was obtained where recording was used, and field notes were maintained to document contextual details, non-verbal observations, group dynamics, and emerging analytic reflections. Facilitators encouraged respectful discussion, avoided judgmental responses, and used neutral probes to reduce social desirability bias, particularly around contraceptive use, male approval, religious concerns, myths, service dissatisfaction, and perceptions of Marvi workers. Safeguards were maintained to protect participants from identification, especially when reporting views from small villages, frontline workers, or district-level programme roles.

Audio recordings and field notes were managed confidentially after data collection. Recorded data were transcribed verbatim and translated into English for analysis where required, while preserving the meaning of locally used terms related to family planning, gender roles, acceptability, trust, privacy, and commodity access. Transcripts were de-identified by removing names and directly identifying personal or village-level details. Participant labels were assigned by participant type and district to support transparent qualitative reporting while protecting anonymity. Data were stored securely and accessed only by the research team involved in transcription oversight, coding, analysis, and interpretation. Translation quality was maintained through review of translated transcripts against field notes and discussion among team members familiar with the local context.

The research team used reflexive procedures throughout data collection and analysis to account for potential influence of evaluator identity, programme familiarity, professional assumptions, and participant expectations. Team members clarified their roles before data collection, maintained a neutral facilitation stance, and used field debriefings to reflect on emerging patterns, possible bias, and areas requiring deeper probing. Because some participants were connected to intervention services, particular attention was given to reducing courtesy bias and perceived pressure to provide favourable responses. Reflexive memos were used to document assumptions, analytic decisions, and interpretation of sensitive themes such as contraceptive myths, male decision-making, mother-in-law influence, mobility restrictions, safety concerns, and trust in Marvi workers.

Thematic analysis was used to analyze the qualitative data because it allowed systematic identification of patterned meanings across participant groups while retaining sensitivity to context and implementation processes (9,10). Analysis began with repeated reading of transcripts and field notes to achieve familiarization with the data. Initial codes were generated from participants' accounts and organized around the evaluation objectives, including awareness, acceptability, access, gendered decision-making, myths, religious framing, service experience, commodity availability, confidentiality, worker trust, supervision, and sustainability. Codes were reviewed across married women, men, Marvi workers, and programme personnel to identify convergent views, contrasting perspectives, and role-specific interpretations. Related codes were then grouped into candidate subthemes and themes, which were refined through team discussion, comparison with the data, and review of illustrative quotations. The final themes were selected on the basis of relevance to the evaluation objectives, recurrence across participant accounts, explanatory value, and ability to illuminate implementation mechanisms rather than frequency alone.

Trustworthiness was strengthened through triangulation across participant groups, comparison of perspectives across districts and roles, use of direct quotations, maintenance of an audit trail, reflexive memoing, and team-based review of codes and themes. Credibility was supported by grounding interpretations in participant accounts and by examining convergence and divergence between women, men, frontline workers, and programme managers. Dependability was addressed through consistent use of semi-structured guides, documentation of field procedures, and systematic coding steps. Confirmability was supported by field notes, analytic memos, and transparent linkage between codes, themes, and quotations. Transferability was enhanced through description of the intervention context, participant categories, district-level implementation setting, and service delivery mechanisms, enabling readers to judge relevance to similar community-based family planning programmes. Ethical approval for the evaluation was obtained from the HANDS Ethical Review Board, and all procedures were conducted in

accordance with ethical principles for voluntary participation, informed consent, confidentiality, anonymity, and protection of participants discussing sensitive reproductive health issues.

RESULTS

The endline qualitative findings showed that the community-based family planning model was perceived as acceptable when services were delivered through trusted local workers, private and accessible spaces, respectful counselling, and reliable commodity availability. Participants described the Marvi worker as a socially accessible bridge between households and formal services, while Marvi Markaz and BiB-supported commodity access were viewed as useful when they reduced travel burden, embarrassment, uncertainty, and repeated visits for contraceptive supplies. The findings also showed that acceptability remained conditional. Women's service use was shaped by spousal approval, mother-in-law influence, fear of side effects, religious and cultural concerns, privacy expectations, perceived safety of methods, and confidence in the worker. Men's accounts emphasized the need for respectful engagement, clear explanation, and reassurance about health, fertility, and religious permissibility. Marvi workers and district-level programme personnel highlighted implementation issues related to refresher training, commodity continuity, documentation, supervision, community resistance, and sustainability after external project support.

Table 1. Theme Matrix Showing Qualitative Patterns Across Participant Groups and Intervention Districts

Theme	Married Women of Reproductive Age	Men	Marvi Workers	DPMs/DPWDOs	Pattern Across Districts	Illustrative Evidence IDs
Trust in Marvi workers as community-linked counsellors	Frequent	Moderate	Frequent	Frequent	Present across intervention districts	Q1, Q2, Q3, Q4
Door-to-door counselling and household-level access	Frequent	Moderate	Frequent	Moderate	Stronger where worker visibility was regular	Q5, Q6, Q7
Marvi Markaz as a safe and familiar service point	Frequent	Rare	Moderate	Moderate	Stronger where privacy and respectful interaction were described	Q8, Q9, Q10
Commodity availability as a condition for continued use	Frequent	Moderate	Frequent	Frequent	Present across districts, especially in relation to repeat visits and continuation	Q11, Q12, Q13, Q14
Myths, fear of side effects, and uncertainty about method safety	Frequent	Frequent	Frequent	Moderate	Present across districts and participant groups	Q15, Q16, Q17
Gendered decision-making and need for male engagement	Frequent	Frequent	Moderate	Frequent	Present across districts, with variation in openness to couple discussion	Q18, Q19, Q20
Influence of mothers-in-law, elders, and community norms	Moderate	Moderate	Frequent	Moderate	More visible in accounts of younger women and household negotiation	Q21, Q22
Privacy, mobility, and safety constraints	Frequent	Rare	Moderate	Moderate	Stronger in women's accounts than men's accounts	Q23, Q24, Q25
Worker capacity, refresher training, and counselling confidence	Rare	Rare	Frequent	Frequent	Present in implementation-focused accounts	Q26, Q27, Q28
Supervision, MIS, documentation, and programme sustainability	Rare	Rare	Moderate	Frequent	Stronger in programme and worker accounts	Q29, Q30, Q31

The theme matrix indicates that acceptability of the model was not linked to a single intervention component but to the interaction between trusted interpersonal counselling, accessible service points, and commodity continuity. Trust in Marvi workers, door-to-door counselling, commodity availability, and concerns about myths or side effects appeared across all major participant groups, although with different

emphases. Women's accounts centered on privacy, reassurance, method safety, mobility, and household negotiation, while men more often framed family planning through responsibility, religious acceptability, cost, and health concerns. Marvi workers and programme personnel described the same barriers from an implementation perspective, emphasizing counselling burden, refresher training needs, supervision, supply continuity, and documentation requirements.

Table 2. Qualitative Evidence Matrix Linking Themes, Subthemes, Participant Groups, and Representative Expressions

Theme	Subtheme	Participant Group	Representative Expression	Interpretation
Trust in Marvi workers as community-linked counsellors	Familiarity and local identity	MWRA	The worker was trusted because she belonged to the community and could be approached without fear or embarrassment.	Local familiarity reduced social distance between women and family planning services.
Trust in Marvi workers as community-linked counsellors	Counselling as reassurance	MWRA	Women described accepting counselling more easily when the worker explained methods calmly and repeatedly.	Repeated explanation helped address fear and uncertainty.
Trust in Marvi workers as community-linked counsellors	Worker credibility	Men	Men were more willing to listen when the worker was known to the family or introduced through a respected local channel.	Male acceptance depended partly on social legitimacy of the messenger.
Trust in Marvi workers as community-linked counsellors	Programme linkage	Marvi worker	Workers described themselves as connecting household concerns with available services and commodities.	The worker role functioned as a bridge between informal household decision-making and formal service delivery.
Door-to-door counselling and household-level access	Reduced mobility burden	MWRA	Home-based counselling was valued because women did not always need to travel or seek permission for an initial discussion.	Door-to-door contact reduced mobility and permission barriers.
Door-to-door counselling and household-level access	Repeated contact	Marvi worker	Workers reported that repeated visits were necessary because family planning decisions were rarely made after one conversation.	Behavioural change was described as a gradual process requiring continuity.
Door-to-door counselling and household-level access	Household negotiation	Men	Men described family planning decisions as matters discussed within the household rather than by women alone.	Counselling strategies need to account for shared or negotiated decision-making.
Marvi Markaz as a safe and familiar service point	Privacy and dignity	MWRA	Women valued a place where they could ask questions without being exposed in front of unrelated community members.	Perceived privacy strengthened acceptability of the service point.
Marvi Markaz as a safe and familiar service point	Female-friendly environment	MWRA	Women described feeling more comfortable when services were provided in a familiar, women-centered setting.	Gender-sensitive service arrangements improved willingness to seek advice.
Marvi Markaz as a safe and familiar service point	Community-based service visibility	DPM/DPWDO	Programme personnel described Marvi Markaz as a recognizable local access point for counselling and commodities.	The service point supported continuity between outreach and commodity provision.
Commodity availability as a condition for continued use	Continuity of method use	MWRA	Women associated reliable availability of contraceptives with confidence to continue a method.	Commodity continuity was central to sustained use.
Commodity availability as a condition for continued use	Avoiding repeated visits	MWRA	Repeated travel for unavailable commodities discouraged women from returning.	Stock availability affected both access and trust.
Commodity availability as a condition for continued use	Supply burden	Marvi worker	Workers described difficulty maintaining community confidence when preferred methods were not available.	Supply gaps weakened counselling credibility.
Commodity availability as a condition for continued use	System responsibility	DPM/DPWDO	Programme personnel linked sustainability with supply-chain planning, monitoring, and timely replenishment.	Commodity access was viewed as a programme-level sustainability issue.
Myths, fear of side effects, and uncertainty about method safety	Fear of infertility or weakness	MWRA	Women reported concerns that contraceptive methods could cause weakness, infertility,	Method-related fears remained a major barrier to uptake and continuation.

Theme	Subtheme	Participant Group	Representative Expression	Interpretation
			menstrual disturbance, or long-term harm.	
Myths, fear of side effects, and uncertainty about method safety	Religious and cultural uncertainty	Men	Some men wanted reassurance that family planning was not religiously or socially inappropriate.	Male engagement requires culturally respectful clarification.
Myths, fear of side effects, and uncertainty about method safety	Managing rumours	Marvi worker	Workers described needing to respond repeatedly to rumours shared by neighbours, relatives, or previous users.	Rumour correction required interpersonal counselling rather than one-time messaging.
Gendered decision-making and need for male engagement	Spousal permission and support	MWRA	Women described husband support as important for starting or continuing a method.	Women's access was shaped by marital communication and decision power.
Gendered decision-making and need for male engagement	Men as decision partners	Men	Men wanted clearer information about method safety, side effects, and family wellbeing before supporting use.	Male engagement should be informational rather than accusatory.
Gendered decision-making and need for male engagement	Couple communication	DPM/DPWDO	Programme personnel identified male engagement as necessary for reducing resistance and improving continuation.	Sustainability depends on engaging household decision-makers.
Influence of mothers-in-law, elders, and community norms	Elder influence	MWRA	Younger women described elders as influential in decisions about timing, spacing, and acceptability of contraceptive use.	Intergenerational authority shaped reproductive choices.
Influence of mothers-in-law, elders, and community norms	Community opinion	Marvi worker	Workers described some households as more receptive after respected community members accepted counselling.	Community norms could function either as resistance or support.
Privacy, mobility, and safety constraints	Restricted movement	MWRA	Women described difficulty accessing services when travel required permission, accompaniment, or explanation.	Mobility restrictions limited independent service use.
Privacy, mobility, and safety constraints	Confidentiality	MWRA	Women preferred counselling arrangements that protected them from gossip or public identification.	Confidentiality was central to acceptability.
Privacy, mobility, and safety constraints	Safe accompaniment	Marvi worker	Workers described accompaniment and referral support as important for women hesitant to visit services alone.	Safety and accompaniment were practical access mechanisms.
Worker capacity, refresher training, and counselling confidence	Need for updated knowledge	Marvi worker	Workers identified refresher training as important for answering questions about methods, side effects, and rumours.	Training quality influenced counselling confidence.
Worker capacity, refresher training, and counselling confidence	Handling resistance	Marvi worker	Workers described needing skills to respond to husbands, elders, and religious or cultural concerns.	Counselling training should include household negotiation and myth response.
Worker capacity, refresher training, and counselling confidence	Supportive supervision	DPM/DPWDO	Programme personnel linked worker performance with supervision, mentoring, and field-level problem solving.	Supervision was viewed as a quality assurance mechanism.
Supervision, MIS, documentation, and programme sustainability	Monitoring and reporting	DPM/DPWDO	Programme personnel emphasized documentation, follow-up, and reporting as necessary for continuity and accountability.	MIS strengthening was central to programme management.
Supervision, MIS, documentation, and programme sustainability	Post-project continuity	DPM/DPWDO	Sustainability was linked with institutional ownership, commodity planning, and continued worker support.	Endline success depended on systems that could continue beyond project support.
Supervision, MIS, documentation, and programme sustainability	Worker motivation	Marvi worker	Workers connected sustained performance with recognition, supervision, and reliable operational support.	Workforce support was a condition for maintaining community trust.

The evidence matrix shows that participants framed family planning access as a relational and operational process rather than a single act of service use. Women's expressions most strongly reflected concerns

about privacy, method safety, trust, mobility, and household permission. Men's expressions reflected the need for respectful explanation and inclusion in decision-making, especially around health concerns, religious acceptability, and family wellbeing. Marvi workers described the practical difficulty of converting awareness into sustained use when myths, elder influence, spousal hesitation, and commodity gaps remained unresolved. Programme personnel emphasized the systems required to sustain perceived gains, particularly supervision, MIS, commodity management, refresher training, and district-level ownership.

Trust emerged as the central mechanism through which the community-based model became acceptable. Women described Marvi workers as more approachable than distant facilities because they were locally known, could communicate in familiar language, and could revisit households over time. This repeated contact was important because family planning decisions were often gradual and negotiated rather than immediate. Trust was not limited to interpersonal warmth; it was also linked to whether the worker could provide accurate information, maintain confidentiality, respond to fears about side effects, and guide women toward commodities or services without exposing them to embarrassment or unnecessary travel.

Door-to-door counselling was perceived as valuable because it brought information into the household setting where reproductive decisions were made. For women, this reduced the burden of mobility, permission, and public visibility. For men, household-level engagement created an opportunity to ask questions about health, spacing, religious concerns, and family responsibilities. For Marvi workers, repeated household contact allowed them to identify resistance, revisit unresolved fears, and involve decision-makers when needed. Across accounts, one-time awareness was considered insufficient; sustained counselling and follow-up were viewed as necessary for converting initial interest into service use or continuation.

Marvi Markaz was perceived as acceptable when it functioned as a safe, familiar, and private service point. Women valued spaces where they could ask questions without being seen by unrelated community members or judged by providers. Privacy was especially important for younger women, women using contraception without broad family disclosure, and women concerned about gossip. The service point was therefore not only a physical location but also a social environment. Its acceptability depended on whether women experienced dignity, confidentiality, and practical access to counselling or commodities. Where the Markaz was linked with trusted workers and available supplies, it strengthened the perceived reliability of the model.

Commodity availability was repeatedly described as a condition for continuation. Participants indicated that counselling alone could not sustain use when preferred methods were unavailable, when women had to make repeated visits, or when supply gaps created uncertainty. Women associated reliable commodity access with confidence in the service, while workers described supply interruptions as damaging to their credibility in the community. Programme personnel similarly framed commodity continuity as a systems issue requiring planning, monitoring, replenishment, and coordination. This theme showed that supply-chain reliability was experienced at the household level as trustworthiness, not merely as a logistical indicator.

Myths and fear of side effects remained prominent barriers. Women expressed concern about weakness, menstrual changes, infertility, excessive bleeding, long-term bodily harm, and suitability of methods after childbirth or during specific health conditions. Men also described uncertainty about method safety and religious or cultural appropriateness. These concerns were not presented as simple lack of awareness but as socially circulated explanations shaped by neighbours, relatives, previous users, and community narratives. Marvi workers reported that correcting myths required patience, repetition, and locally credible examples. The findings indicate that myth reduction requires counselling that acknowledges fear respectfully rather than dismissing it as ignorance.

Gendered decision-making shaped both access and continuation. Women's ability to initiate or continue contraception was often influenced by husbands, mothers-in-law, elders, and wider household expectations. Some women described needing approval before visiting services or using a method, while men described wanting clearer information before supporting family planning. The findings suggest that

male engagement should be designed as constructive inclusion rather than confrontation. Men were more likely to be described as potential supporters when counselling addressed family wellbeing, maternal health, birth spacing, economic burden, and method safety in culturally acceptable language. At the same time, women's confidentiality and autonomy remained essential, particularly where disclosure could create conflict.

The influence of mothers-in-law and elders appeared as both a barrier and a potential facilitator. Younger women were more likely to describe elder influence over reproductive timing, spacing, and acceptability of contraceptive use. Marvi workers noted that community resistance could soften when respected elders or influential households accepted counselling. This finding shows that social authority should not be treated only as opposition. When engaged carefully, elders and community influencers may help normalize birth spacing, reduce fear, and support women's access to services. However, such engagement must avoid reinforcing coercive control over women's reproductive decisions.

Privacy, mobility, and safety constraints were more prominent in women's accounts than in men's accounts. Women described the need for permission, accompaniment, discretion, and safe access routes. Fear of being seen, questioned, or discussed by others affected willingness to seek counselling or commodities. The model was therefore most acceptable when it reduced unnecessary exposure and provided confidential entry points through trusted workers or familiar service spaces. Safe accompaniment and referral support were described as practical mechanisms that helped women navigate service use within restrictive social environments.

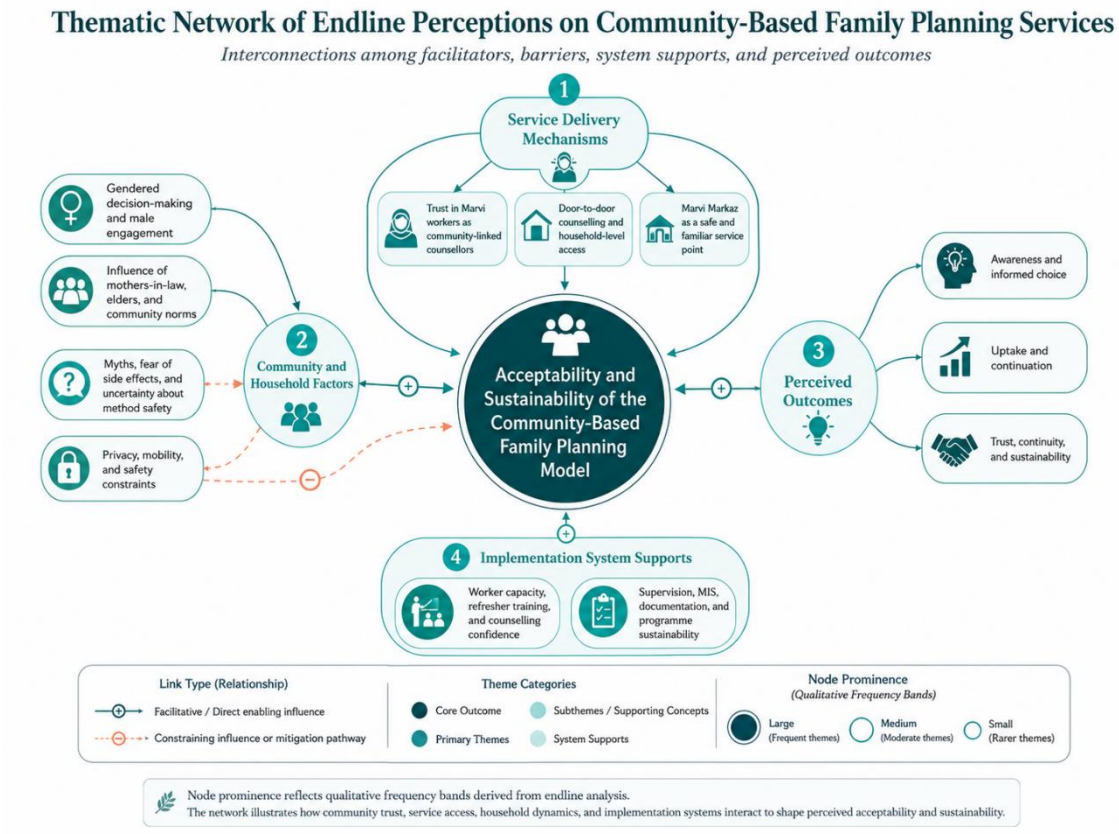

Figure 1. Thematic Network of Endline Perceptions on Community-Based Family Planning Services. The network illustrates how service delivery mechanisms, community and household factors, implementation system supports, and perceived outcomes interact to shape the acceptability and sustainability of the community-based family planning model. The central node represents the core analytic construct, while surrounding primary themes and subthemes show enabling and constraining pathways. Solid teal connectors indicate facilitative or direct enabling influences, whereas dotted coral connectors indicate constraining influences or mitigation pathways. Node prominence reflects qualitative frequency bands derived from the endline analysis.

Implementation-focused participants emphasized that the model's sustainability depended on maintaining worker capacity and system support. Marvi workers identified refresher training as necessary for answering method-specific questions, responding to myths, managing household resistance, and

maintaining counselling confidence. Programme personnel highlighted supervision, MIS, reporting, commodity planning, and district ownership as conditions for continuity. These accounts suggest that the model's perceived success was not self-sustaining without continued investment in frontline workers, supportive supervision, reliable supplies, and monitoring systems that capture both service outputs and community-level barriers.

Overall, the results indicate that the endline acceptability of the Marvi worker, Marvi Markaz, and BiB-linked commodity access model rested on five interrelated mechanisms: trusted interpersonal counselling, privacy-sensitive service access, reliable commodity availability, household-level negotiation, and implementation system support. The strongest perceived facilitators were trust in local workers, door-to-door follow-up, safe spaces for women, and availability of methods close to the community. The most persistent barriers were myths about side effects, gendered decision-making, elder influence, mobility restrictions, commodity interruptions, and the need for continued worker training and supervision. The findings support a sustainability approach that combines female-centered confidential services with structured male engagement, refresher training, commodity assurance, supportive supervision, and district-level monitoring.

DISCUSSION

This qualitative endline evaluation showed that the perceived acceptability and sustainability of the community-based family planning model were shaped by the interaction of trust, gendered household decision-making, service accessibility, commodity continuity, privacy, and implementation support. Participants did not describe family planning use as a simple matter of awareness or method availability. Instead, reproductive decisions were embedded in household negotiations, community norms, religious and cultural interpretations, fears about side effects, mobility restrictions, and confidence in the person or service delivering information. The findings therefore support a relational and implementation-oriented interpretation of family planning access, in which women's ability to seek, accept, and continue contraceptive services depends on whether counselling is trusted, services are discreet and reachable, methods are consistently available, and household decision-makers are engaged in ways that do not undermine women's confidentiality or autonomy.

The central role of Marvi workers in participants' accounts is consistent with the broader experience of community health worker models in Pakistan, where locally embedded female workers can reduce social distance between households and formal health services by providing repeated counselling, culturally familiar communication, referral support, and household-level follow-up (6). In the present evaluation, the Marvi worker was not perceived merely as an information provider but as a mediator of trust. Women valued workers who could explain methods calmly, respond to fears, preserve confidentiality, and revisit households when decisions were delayed. This finding is important because family planning counselling in rural Sindh often occurs within a socially sensitive environment where women may face embarrassment, restricted mobility, and concern about community gossip. Trust in the worker allowed service information to enter the household in a more acceptable form, but this trust depended on worker competence, respectful behaviour, and the ability to connect women with actual services and commodities.

The findings also highlight that door-to-door counselling remains a critical mechanism for reaching women whose reproductive health choices are constrained by mobility, permission, domestic workload, and privacy concerns. Women's accounts suggested that home-based counselling reduced the initial threshold for asking questions and allowed reproductive health discussions to occur without requiring immediate travel to a facility. However, the findings also indicate that door-to-door contact should not be understood as a one-time awareness activity. Marvi workers described the need for repeated visits because decisions about contraception were often gradual, negotiated, and influenced by husbands, mothers-in-law, elders, and previous stories about side effects. This pattern aligns with evidence from Pakistan showing that contraceptive non-use is often shaped by social influence, fear of harm, spousal approval, and household authority rather than by knowledge deficit alone (4,5).

Gendered decision-making emerged as one of the most important interpretive themes. Women's ability to use or continue contraception was frequently shaped by husbands' support, elder approval, and household norms regarding fertility, spacing, and women's movement outside the home. Men's accounts did not indicate that male involvement should be reduced to resistance; rather, men often required information that addressed family wellbeing, maternal health, economic responsibility, method safety, and religious or cultural concerns. This suggests that male engagement should be built into the model as a structured, respectful, and context-sensitive strategy. At the same time, male engagement must be designed carefully so that it does not convert women's access to contraception into a process requiring male permission in every case. A balanced approach is needed in which men are engaged as supportive partners while women's privacy, informed choice, and confidential counselling remain protected.

The influence of mothers-in-law, elders, and community norms also requires careful interpretation. The findings show that elder authority can delay or discourage contraceptive use when family planning is viewed as harmful, shameful, unnecessary, or socially inappropriate. However, the same authority can also facilitate acceptance when respected family or community members normalize birth spacing, support women's health, or validate the legitimacy of services. This dual role suggests that intervention strategies should not treat household influence only as a barrier. Community engagement should include elders and influential household members where appropriate, but it should be framed around maternal wellbeing, child health, birth spacing, and informed family decision-making rather than coercive control over women's reproductive choices.

Myths, fear of side effects, and uncertainty about method safety remained persistent barriers across participant groups. Women expressed concerns about weakness, menstrual disturbance, infertility, excessive bleeding, and long-term bodily harm, while men also raised concerns about safety, religious acceptability, and family consequences. These concerns appeared to circulate through neighbours, relatives, previous users, and community narratives. The findings indicate that myth reduction requires more than general health education. Participants needed personalized counselling that acknowledged fears respectfully, explained method-specific effects in understandable language, distinguished common side effects from danger signs, and provided clear guidance on where to seek help. Marvi workers therefore require ongoing refresher training not only in method knowledge but also in risk communication, myth response, and counselling for hesitant households.

Privacy and safety were major conditions of acceptability, particularly for women. The value of Marvi Markaz was linked to its potential to provide a familiar, women-centered, and discreet service point where questions could be asked without public exposure. In contexts where women's mobility is monitored or where contraceptive use may attract gossip, service acceptability depends heavily on whether the pathway to counselling and commodities protects dignity and confidentiality. The findings suggest that Marvi Markaz and similar community-based access points should be strengthened as safe spaces rather than treated only as distribution sites. Privacy arrangements, respectful staff behaviour, female-friendly timing, and referral support are therefore essential components of quality, not optional service features.

Commodity availability was another decisive condition for perceived sustainability. Participants and workers described the availability of contraceptives as directly linked to confidence in the model. When commodities were available close to the community, counselling became actionable and continuation became more feasible. When preferred methods were unavailable or women had to make repeated visits, confidence in the service weakened and Marvi workers' credibility was affected. This finding shows that supply-chain reliability is experienced by communities as a form of trust. A worker who counsels effectively but cannot connect women to available methods may gradually lose authority. Sustainable implementation therefore requires timely replenishment, practical stock monitoring, clear referral routes, and communication with workers about method availability.

The implementation implications of these findings are clear. First, Marvi workers need regular refresher training in contraceptive methods, side-effect counselling, myth correction, couple communication, confidentiality, and referral guidance. Second, male engagement should be formalized through culturally

acceptable counselling opportunities that address health, religion, economics, and family wellbeing while preserving women's right to confidential information. Third, commodity supply chains should be monitored as a core quality and trust indicator, not only as a logistical function. Fourth, supervision and MIS should capture qualitative barriers such as stock-outs, refusal reasons, myth patterns, safety concerns, and referral challenges, in addition to routine service counts. Fifth, safe spaces and accompaniment mechanisms should be maintained for women who face mobility restrictions, privacy concerns, or household resistance.

The findings should be interpreted in light of the qualitative endline design. The study provides insight into perceived mechanisms of acceptability, barriers, facilitators, and sustainability conditions, but it does not independently measure population-level contraceptive uptake or causal programme effects. Social desirability may have influenced some responses, particularly where participants were recruited through intervention-linked pathways or where Marvi workers and programme staff discussed a model in which they were involved. Women may also have moderated criticism because family planning is a socially sensitive subject and because confidentiality concerns can affect disclosure. Translation from local languages into English may have led to some loss of nuance, particularly for culturally specific expressions related to shame, permission, religious acceptability, and bodily fears. The endline-only design also limited comparison with pre-intervention perceptions. Despite these limitations, triangulation across women, men, frontline workers, and programme personnel strengthened the interpretation by showing how household-level experience, service delivery, and implementation systems interacted to shape perceived acceptability and sustainability.

CONCLUSION

This qualitative endline evaluation indicates that the community-based family planning model was perceived as acceptable when it combined trusted Marvi workers, door-to-door counselling, safe and familiar service spaces, respectful communication, and reliable commodity access. The findings suggest that perceived sustainability depends not only on community awareness but also on the conditions that allow women and families to act on that awareness, including trust, confidentiality, male and elder engagement, myth-sensitive counselling, worker competence, supervision, MIS, and uninterrupted contraceptive supply. The model's strongest mechanisms were its ability to reduce social distance between households and services, create safer entry points for women, and translate family planning information into locally acceptable counselling. Persistent barriers included fear of side effects, gendered decision-making, elder influence, privacy concerns, mobility restrictions, and implementation dependence on worker support and commodity continuity. Strengthening the model therefore requires regular refresher training for Marvi workers, structured male engagement, privacy-sensitive service arrangements, reliable supply-chain monitoring, supportive supervision, and district-level ownership to sustain trust, access, continuation, and informed reproductive choice without overclaiming population-level effects beyond the qualitative evidence.

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