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Exploration of Mothers and Caregivers' Perspectives on Vaccination Dropout among Children Aged 12-23 Months in The Gambia: Using Thematic Analytical Approach

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Abstract

In recent years, full childhood routine immunisation coverage has fallen by 5% to levels not seen since 2008; between 2019 and 2021, 67 million children were under-vaccinated. We aimed to identify and describe the determinants of vaccination drop-out from the perspectives of mothers and caregivers. In The Gambia, vaccination coverage has improved from 76% in 2015 to 85% in 2020-21. However, this coverage is still behind the target set by the Global Vaccine Action Plan (GVAP) of 90% and 80% coverages for all antigens at the national and district levels respectively by 2020. These disparities highlight systemic barriers and the need to identify determinants of dropout to guide targeted interventions. The study was conducted in Upper River Region (rural) and West Coast Health Region 2 (semi-urban), selected for their historically high dropout rates (6.1% and 7.5% respectively). We conducted focus group discussions with community stakeholders, including mothers' clubs and traditional communicators, to gain deeper insights into social and structural influences on vaccination dropout. Findings of the study revealed that caregivers generally possessed adequate awareness of the purpose and benefits of childhood vaccination and widely associated vaccination with disease prevention, child survival and development. Health workers emerged as the most credible and influential source of vaccination information, seconded by community-based actors such as village health workers and local leaders. Interventions should therefore be tailored to address drivers of dropout in communities. Service quality, timeliness and reliability need to be improved, and tailored messaging and awareness creation are needed.

Keywords: *Drop Out, Gambia, Immunization, Pentavalent, Vaccination.*

Introduction

Vaccination is considered the most successful and cost-effective public health intervention against infectious diseases [1, 2]. Each year, about 3 million deaths among children are prevented from vaccine-preventable diseases (VPDs) such as diphtheria, tetanus, pertussis, influenza, and measles [3]. However, during the COVID-19 pandemic from 2019 to 2021, an estimated 67 million children did not complete the routine childhood vaccination schedules to protect them from life-threatening diseases [4]. By 2021, global immunisation coverage for infants had fallen to 81%, the lowest rate in over a

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decade, largely due to the COVID-19 pandemic's crippling impact on global vaccine supply chains and disruptions to routine health services [5].

The Gambia's National Immunisation Programme recommended that all children receive 16 doses of vaccines before age 2, including 1 dose of BCG, 3 of pentavalent vaccine (DPT-HepB-Hib), 4 of oral polio vaccine (OPV), 1 of inactivated polio vaccine, 3 of pneumococcal conjugate vaccine (PCV), 2 of rotavirus vaccine and 2 of measles containing vaccines and a dose of Yellow Fever [6]. The country is in the process of introducing the four doses of the malaria vaccine into the routine schedule [6]. Immunization services are delivered both in public health facilities, including at static and outreach sessions in communities, as well as through private facilities. The government purchases and freely provides vaccines to both public and private facilities, but caregivers who seek services from private facilities often pay fees for children to be weighed and other services prior to vaccination.

In The Gambia, despite significant progress in immunization coverage—from 76% in 2013 to 85% in 2020—vaccination dropout remains a major challenge to achieving full protection [7]. In this study, vaccination dropout is defined as receipt of Penta1 but failure to receive Penta3 by 12-23 months of age. The 2020 Demographic and Health Survey (DHS) reported high initial uptake of multi-dose vaccines such as DPT-HepB-Hib, pneumococcal conjugate vaccine (PCV), and rotavirus vaccine (98–99%), yet completion rates declined to 92–95% for the final doses [6]. A 2024 vaccination coverage survey further revealed marked regional disparities, with dropout rates reaching 6.1% in Upper River Region and 7.5% in Western Region 2. These patterns suggest the presence of systemic and structural barriers that warrant further investigation.

The dropout rate is one of the determinants of immunization coverage and program performance, program continuity, and follow-up. Immunization dropout signifies that the child has received the first recommended dose of the vaccine yet has missed the next recommended dose. It is the rate difference between the first and final dosage or the rate difference between the first vaccination and the last vaccine dropout, so it denotes that the first recommended dose of the vaccine was received, but the subsequent recommended doses are not received. For instance, if children miss the three doses of pentavalent vaccine, it shows to the fact that there an access problem while a high dropout rate between Penta1 and the measles immunization suggests a service utilizations problem [19]. In addition, the measles vaccination dropout rate indicates whether the national immunization program is able to reach children beyond the first year of life with vaccination services [18]. The World Health Organization (WHO) recommended that Penta 1 to Penta3, BCG to Measle-Containing Virus (MCV1), and MCV1 to MCV2 should be used as the indicators of immunization dropout [18]. Furthermore, WHO stresses that if the dropout rate is more than 10%, then it implies that many children are not using the services [20, 21].

Addressing barriers to full vaccination is especially important in The Gambia. Strengthening routine immunization services, mass vaccination campaigns, Periodic Intensification of Routine Immunization (PIRI) especially in difficult to reach and underserved communities will help reduce vaccination dropout. Policy makers therefore need to address the barriers to vaccination services including the disproportionate concentration of vaccination dropout in remote and underserved communities by strengthening women's accessibility to health facilities in rural communities [11, 12]. Vaccination coverage rates can be improved through the use of postcards, automated telephone reminders and short message services (SMSs) through mobile phones.

Previous research in low-income and middle-income countries has identified barriers at the individual, interpersonal and health systems levels that can lead to vaccination drop-out, including poor access to facilities, unreliable and poorly perceived service quality, fear of side effects, lack of family support, gender dynamics, health worker availability, missed opportunities, childcare challenges for siblings, lack of motivation, poor attitudes and behaviour by health workers, loss of vaccination cards and displacement or migration of caregivers [8-10, 13, 17]. Studies conducted in The Gambia and Malawi, for instance, highlighted additional barriers such as poor understandings of vaccination schedules, rumours or misconceptions fueled by religious beliefs, insufficient communication between health workers and communities, and unreliable outreach services [14-16].

Research Methodology

This study employed a concurrent mixed methods design to investigate factors associated with vaccination dropout in The Gambia. The study will be conducted in two distinct health regions: Upper River Region (URR) and West Coast Region 2 (WCR2), selected for their historically high dropout rates (6.1% and 7.5% respectively). The mixed methods design allows for simultaneous collection of both quantitative and qualitative data, providing complementary insights into the complex factors influencing vaccination dropout.

Research Design

The study adopts a case-control design for the quantitative component, complemented by a qualitative investigation. Focus Group Discussions (FGDs) were held with special groups such as Mothers' clubs, traditional communicators, who were expected to be closed to these health facilities to explore deeper knowledge into the research topic.

Study Setting

The research was conducted in selected health facilities within URR and WCR2. These regions represent diverse geographical and socioeconomic contexts, with URR being predominantly rural and WCR2 primarily urban/peri urban. Health facilities from these regions were selected based on dropout rates identified through DHIS2 data analysis.

Qualitative Strand Sample Size and Selection

The qualitative component employed purposive sampling with maximum variation to ensure diverse perspectives. The sample size was guided by the principle of information power and theoretical saturation, with initial targets as follows:

- *Key Informant Interviews (KIIs):*
  1. 10 healthcare providers (5 per region)
  2. Selection criteria: minimum 2 years' experience in immunization services, representation of different cadres (nurses, public health officers, supervisors)
- *2. Focus Group Discussions (FGDs):*
  1. 4 FGDs (2 per region) to ensure homogeneity and to encourage open discussion.
  2. 8-10 participants per group
  3. Special groups such as Mothers' clubs, traditional communicators etc would be identified and interviewed.

Inclusion and Exclusion Criteria

For Focus Group Discussions and in-depth interviews, the study included mothers/caregivers from special groups (Traditional Communicators, MSGs etc) that demonstrated willingness to share detailed experiences about vaccination services. Priority was given to participants who could communicate effectively in local languages (Mandinka, Fula, or Wolof) and have been primary caregivers throughout their children's vaccination schedules. For the focus group discussions, participants must be comfortable sharing experiences in a group setting and available for the full duration of the discussion. Those with hearing or speech impairments that might hinder group interaction were offered individual interviews instead.

Qualitative Data Collection and Analysis

The qualitative component employed systematic data collection and analysis procedures designed to ensure methodological rigor and comprehensive understanding of vaccination dropout determinants. Individual in-depth interviews were conducted with mothers of children who dropped out of vaccination (n=12) and healthcare workers from study facilities (n=12), using semi-structured interview guides with an expected duration of 60-90 minutes per interview. Focus group discussions were conducted with mothers of both dropout and complete vaccination children (n=4 groups) and community leaders including traditional healers, religious leaders, and community health volunteers (n=4 groups). Each focus group comprised 6-8 participants with homogeneous composition to encourage open discussion, lasting 90-120 minutes including introduction, main discussion, and closing activities.

Data Collection Procedures and Recording

All qualitative data collection sessions were digitally audio-recorded using high-quality recording devices with participant consent, supplemented by backup recording equipment to prevent data loss. Detailed field notes were maintained by facilitators and co-facilitators, documenting non-verbal observations, contextual factors, group dynamics, and immediate reflections on key themes. Multiple strategies were employed to ensure comprehensive participation including round-robin questioning techniques, direct invitations for quiet participants, small group breakout activities within focus groups, and anonymous written input opportunities for sensitive topics. Culturally appropriate facilitation techniques recognized local communication styles and social hierarchies that might influence participation patterns.

Data Saturation Strategy

Data saturation was assessed systematically using constant comparative analysis conducted after every third interview or focus group discussion. The saturation assessment process began after completing minimum thresholds of 15 individual interviews and 6 focus group discussions to ensure adequate preliminary data for meaningful comparison. Saturation was defined as the point where no new themes, patterns, or insights emerge in three consecutive data collection events, with existing themes becoming increasingly redundant and predictable. The assessment was conducted by the primary qualitative analyst in consultation with the research team, using a structured saturation grid documenting new themes, sub-themes, and insights from each data collection event. If saturation was not achieved after the planned sample size, additional interviews or focus groups were conducted up to a maximum of 30 interviews and 12 focus groups.

Transcription and Translation Procedures

All audio recordings were transcribed verbatim within 48 hours of data collection by professional transcribers with native fluency in study languages and extensive experience with health research terminology. Transcribers were selected based on language competency, previous research experience, and successful completion of confidentiality training and data protection certification. For interviews conducted in local languages (Mandinka, Fula, or Wolof), a two-step process was employed: first, direct transcription in the original language, followed by translation to English by certified translators. Quality control measures included research team review of 20% of transcripts against original recordings for accuracy verification, with systematic error patterns documented and addressed through additional transcriber training. Back-translation of a random 20% sample will be conducted to ensure translation accuracy and maintain conceptual equivalence, with local terms and culturally specific concepts documented with explanatory notes to preserve meaning during analysis.

Analysis Team and Inter-Coder Reliability

The qualitative analysis team comprised of the researchers with support from the local supervisor and data expert: the researcher with extensive mixed-methods health research experience, the local supervisor (a qualitative research specialist) with doctoral-level training in qualitative methods, and a data expert with master-level training and cultural knowledge. All team members received training in framework analysis methodology, coding procedures, and NVivo 12 software use before beginning analysis. Inter-coder reliability was rigorously assessed with all three team members independently coding the same subset of transcripts (minimum 20% of total data) using the preliminary coding framework. Cohen's kappa coefficients were calculated to assess pairwise agreement between coders, with target kappa values of ≥0.80 indicating substantial agreement. Krippendorff's alpha was used for assessing reliability across all three coders simultaneously. Discrepancies in coding were systematically documented and resolved through structured discussion sessions, with consensus coding achieved through negotiation and discussion.

Quality Assurance and Validation

Throughout the analysis process, regular team meetings will be held to discuss emerging findings and ensure analytical rigor. The analysis will pay particular attention to deviant cases that don't fit emerging patterns, using them to refine and validate the developing theoretical understanding. Member checking will be conducted with a subset of participants to validate interpretations and enhance credibility. Team members will maintain reflexive journals documenting analytical decisions, potential biases, and evolving interpretations throughout the process. The findings will be presented using thick description, incorporating verbatim quotes to support themes while maintaining participant confidentiality through pseudonyms.

Triangulation and Bias Mitigation

Potential limitations including recall bias and social desirability bias will be addressed through multiple strategies. Mothers might misremember reasons for dropout, especially regarding logistical barriers like clinic stockouts, while social desirability bias may lead participants to under-report forgetfulness or negligence as reasons for dropout. To minimize these biases, responses will be triangulated with clinic records and healthcare worker interviews to verify reasons for dropout. If mothers report inability to access vaccines due to stockouts, this will be compared with facility stock records to confirm if stockouts actually occurred at the reported times. Healthcare worker perspectives will be triangulated with facility assessments and service delivery data to validate reported system barriers. The integration of quantitative and qualitative findings will provide additional validation through methodological triangulation, with convergent, complementary, and discordant findings systematically examined and interpreted.

Data Collection Tools and Descriptions

For qualitative data collection, semi-structured interview guides were developed for questions related to vaccination dropout and completion of vaccination schedules. These guides were structured around key domains identified from the literature review and conceptual framework, while allowing flexibility to explore emerging themes. Focus group discussion guides were designed to facilitate group dynamics and encourage interactive dialogue about community perceptions and experiences with vaccination services. All qualitative tools included probing questions to elicit rich, detailed responses about barriers and facilitators to vaccination completion.

Language and Cultural Adaptation

The questionnaires were administered in participants' preferred language among English, Mandinka, Wolof, and Fula, covering over 95% of the target population. Translation followed rigorous forward-backward translation procedures using certified translators, with independent back-translation verification and expert committee review. Data collectors were matched to participants based on language preference, and standardized prompts and probes were developed in all target languages. Regular team discussions addressed translation challenges, with documentation of translation decisions and cultural adaptations maintained throughout the study period.

Ethical Considerations

Ethical clearance was obtained from The University of The Gambia (UTG) Research & Ethics Committee. In addition, letters of permission to conduct the study were also obtained from the MoH’s Director of Health Services and Regional Directors of Health in the selected health regions. Written informed consent was provided to participants before data collection. For those participants who cannot read and write, there were interpreters who interpreted the whole consent form in their local languages. Once consent was given, these participants were expected to thump print on the consent form, indicating their willingness to participate in the study. All the participants participating in the study were informed that participation was totally voluntary. The right to withdraw from the study at any moment during the interview was assured. No personal identifiers were used on data collection forms. The recorded data will not be accessed by a third person except the researcher and will be kept confidentially and anonymously. The purpose of the research was to gather information about children’s vaccination status and no blood sample was collected from participants. In addition, participants (both health workers and mothers) were not paid or given any financial incentives. Participation was voluntary.

Permission to use data

Having obtained ethical approval the UTG Research & Ethics Committee. permission to use data, project reports and activity plans will be sought in writing from the Ministry of Health of The Gambia.

Confidentiality

All through the process of review and extraction of information needed to complete this research, all raw data (reports, plans, project documents) with identifying information will only be kept by the researcher in a password protected computer and any hard copies will be kept under key and lock to restrict access to only the researcher. All information identifying health facilities and organizations from which information is extracted will be replaced with codes during analysis so that all information is anonymous. The dissertation will then be written as a whole with no identifying information.

Data protection

Data was highly anonymized. All study data will be stored for a minimum of five years following the dissemination of results. Study data was collected both electronically and paper based.

Digital data will be kept on a password-protected computer owned by the researcher himself. Access to this data will be limited to the researcher or any authorized members of the core research team only.

Data will be destroyed after the minimum five-year retention period, The data will be safely destroyed, in line with the national guidelines and policies, and in accordance with ethical principles of confidentiality, data protection, and legal compliance. The destruction process will be designed to: protect participant confidentiality, prevent unauthorized access or data breaches, Comply with ethical approvals, informed consent agreements, and applicable data protection laws

The researcher will employ the following methods of data destruction:

1. Digital or Electronic Data: Files stored on computers or cloud systems will be permanently deleted and securely erased using certified file-erasing software (e.g., file eraser).
2. Email-based data or information backed up on drives will be securely and permanently overwritten or removed from storage systems.
3. Data stored on external devices (USBs, external hard drives) will either be physically destroyed or wiped using professional data-wiping tools.
4. Paper-Based Records (if any): Any physical documents, such as questionnaires or consent forms, will be shredded using a cross-cut shredder or destroyed in accordance with institutional procedures.

The researcher will conduct all procedures in line with national guidelines and policies. The researcher will also align the data storage and destruction processes of this study to Gambia's data protection guidelines and best practices in research ethics.

To ensure the principles of privacy and confidentiality during interviews and focus group discussions (FGDs), the following measures will be implemented:

1. Training of Data Collectors: All data collectors had training on ethical research practices, with a strong focus on data confidentiality, privacy protection, and respectful engagement with participants.
2. Confidentiality Agreements: Prior to data collection, all data collectors signed a confidentiality and privacy agreement, committing to protecting participants' information and handling all data responsibly.
3. Interviews and FGDs were conducted in private, quiet, and secure locations that ensure participants could speak freely without fear of being overheard or identified.
4. For Focus Group Discussions (FGDs), the following additional measures were employed: All FGD participants were asked to sign a group confidentiality agreement in their own local languages before the session began. This agreement emphasized the importance of not disclosing any personal information or discussions outside of the group setting.

While this study presents minimal physical risk, it was recognized that some questions may cause emotional discomfort—particularly for mothers reflecting on their child's missed vaccinations or for healthcare workers discussing systemic challenges in service delivery. To address this, all data collectors were trained to conduct interviews in a sensitive, respectful, and non-judgmental manner, with the ability to recognize signs of participant distress. Participants were informed that their involvement was voluntary, that they may skip any question, and that they may withdraw at any point without penalty. If a participant became visibly distressed, the interview was paused, and the participant was given the option to continue, reschedule, or stop the interview. Where necessary, participants were referred to appropriate psychosocial support services, including the Mental Health Unit under the Ministry of Health. Contact details for these services were shared with participants as part of the consent process. This distress protocol ensured that emotional well-being as respected and protected throughout the research.

Results of the Focus Group Discussions

Understanding and Perceived Benefits of Childhood Vaccination

Participants across all FGDs demonstrated a generally strong understanding of childhood vaccination. Vaccination was commonly described as a preventive health measure that protects children from illnesses and strengthens immunity. Caregivers frequently associated vaccination with child survival, healthy growth, and protection from diseases that were perceived as severe or life-threatening.

Several participants referenced specific vaccine-preventable diseases such as polio, measles, meningitis, and COVID-19, indicating awareness of both routine immunization and campaign-based vaccines. This understanding often motivated continued attendance at vaccination sessions even when children were no longer receiving injections but only supplements or monitoring services.

However, a small number of participants noted that while vaccination was generally understood, not all caregivers fully appreciated the importance of completing the entire vaccination schedule, which contributed to partial or incomplete vaccination among some children.

Illustrative quotations:

> "Childhood vaccination is all about giving children vaccines that will protect them from sicknesses and ensure their overall health."
>
> "If a child is vaccinated, they grow healthy and are protected from diseases that used to affect many children before."

Sources of Information and Communication on Vaccination

Health workers emerged as the most trusted and influential source of information on childhood vaccination. Participants consistently reported receiving vaccination information during RCH sessions through health talks, counseling, and direct interactions with nurses and public health officers.

Community-based structures such as village health workers, community birth companions, and local leaders played a critical role in disseminating information and reminding caregivers about upcoming vaccination sessions. These actors were especially important in mobilizing women and addressing forgetfulness regarding appointment dates.

In addition to formal sources, participants acknowledged exposure to information from radio, social media platforms, WhatsApp audios, and community discussions. While these channels sometimes supported vaccination campaigns, they were also identified as major pathways for misinformation and rumors.

Illustrative quotations:

> "Normally, vaccination schedules are communicated to us through our village health worker and community birth companions."
>
> "Sometimes we hear information on the radio or see videos on social media about vaccination campaigns."

Attitudes Toward Childhood Vaccination

Overall, attitudes toward childhood vaccination were overwhelmingly positive. Most caregivers expressed strong support for vaccinating their children and viewed vaccination as an essential and beneficial service, particularly because it is provided free of charge.

Vaccination was also described by some participants as a social norm or tradition that has been practiced across generations, reinforcing acceptance within communities. Positive attitudes were often strengthened by visible benefits, such as healthier children and reduced incidence of serious illnesses.

Despite these positive attitudes, participants acknowledged that a minority of caregivers remained hesitant or inconsistent in attendance due to fears, misconceptions, or competing responsibilities.

Illustrative quotations:

"We are happy about immunization because it helps our children grow healthy."

Fears, Concerns, and Misconceptions Related to Vaccination

Fear of side effects was one of the most commonly reported concerns. Caregivers frequently mentioned pain, fever, swelling, persistent crying, and abscesses following injections. These experiences sometimes caused anxiety and emotional distress, particularly among first-time mothers.

Misinformation and conspiracy beliefs were also discussed, especially information circulating through WhatsApp audios and social media. Some participants reported hearing claims that vaccines were unsafe, intended to harm specific populations, or could cause death or infertility.

Despite exposure to misinformation, many caregivers indicated that trust in health workers and personal observation of vaccinated children helped counter these fears and encouraged continued participation in vaccination services.

Illustrative quotations:

> "We hear audios saying the vaccines are meant to eliminate us, but when health workers explained, we understood it was not true."
>
> "The child may cry or get fever, but we still come back because we know it is for their protection."

Barriers to Vaccination Completion and Dropout

Participants identified multiple interconnected barriers that contribute to vaccination dropout. Distance to health facilities and the physical burden of trekking, particularly for caregivers with multiple young children, were frequently cited challenges.

Long waiting times at clinics were another major barrier. Caregivers reported arriving early but remaining at facilities until afternoon, which conflicted with household chores, farming activities, and food preparation responsibilities.

Pregnancy and birth-spacing stigma also emerged as an important factor. Some women reported feeling ashamed to bring an older child for vaccination when they were pregnant again or had recently delivered, leading to selective attendance for younger children only.

Additionally, caregivers described reduced motivation to attend sessions when children were no longer receiving injections or when weighing and other services were unavailable.

Illustrative quotations:

> "Sometimes when a woman gets pregnant, she only brings the newborn and leaves the older child because she feels shy."
>
> "You can come in the morning and stay until afternoon, and that makes it difficult to continue coming every month."

Decision-Making Dynamics and Gender Roles

Mothers were identified as the primary decision-makers regarding childhood vaccination in most households. They were responsible for taking children to clinics, keeping vaccination cards, and interacting with health workers.

Fathers and other family members also played influential roles, either by providing support such as transport fares and reminders or, in some cases, discouraging participation due to personal beliefs or social norms.

Gender norms were noted to influence male involvement, with some men perceiving vaccination clinics as female spaces, which limited their direct participation in child health services.

Illustrative quotations:

"In our community, mothers are the ones who mostly take children for vaccination."

Experience with Health Workers and Service Delivery

Most participants described positive experiences with health workers, emphasizing respectful treatment, patience, and clear communication during vaccination sessions. Positive interactions increased trust and motivated caregivers to continue attending clinics.

However, a few concerns were raised regarding injection techniques and occasional operational challenges such as card mix-ups or overcrowding during clinic days. These issues, although not widespread, contributed to anxiety among some caregivers.

Overall, the quality of interpersonal communication between health workers and caregivers was viewed as a critical factor influencing vaccination uptake and completion.

Illustrative quotations:

"They are polite and explain everything well, that is why we trust them."

Community Support and Suggested Solutions

Participants highlighted strong peer and community support systems, particularly among women who attend clinics together and encourage one another. Community health volunteers and leaders were seen as instrumental in sustaining vaccination activities.

Suggested solutions focused on improving service accessibility and convenience. These included expanding mobile and outreach clinics, opening more vaccination sites in remote communities, reducing waiting times, and improving reminder systems.

Participants also emphasized the need for continuous sensitization, home visits, and increased male involvement to address persistent barriers and misconceptions.

Illustrative quotations:

"If health workers come earlier and reduce waiting time, more mothers will complete the vaccination."

Summary of Key Findings

The study examined the determinants of childhood vaccination dropout in The Gambia through qualitative methods involving caregivers, community stakeholders, and health workers. Findings indicate that vaccination dropout is multifactorial, arising from the interaction of cognitive, socio-cultural, and health-system–related factors rather than outright refusal of immunization.

Caregivers generally possessed adequate awareness of the purpose and benefits of childhood vaccination and widely associated immunization with disease prevention, child survival, and healthy development. Nonetheless, a persistent knowledge gap was observed regarding the importance of completing the full vaccination schedule, with some caregivers perceiving early doses as sufficient protection. Health workers emerged as the most credible and influential source of vaccination information, supported by community-based actors such as village health workers and local leaders. However, mass and social media simultaneously functioned as channels for misinformation, contributing to uncertainty and fear.

Attitudes toward vaccination were predominantly positive, with immunization viewed as socially normative and beneficial, particularly due to its free availability. Despite this overall acceptance, a minority of caregivers exhibited hesitancy or inconsistent attendance linked to misconceptions, fear of adverse effects, and competing livelihood responsibilities. Concerns about side effects—especially fever, swelling, and pain—were frequently cited and amplified by circulating rumors and conspiracy narratives, although trust in health professionals and personal observation of vaccinated children often mitigated these fears.

Structural and logistical barriers constituted significant contributors to dropout. Long distances to health facilities, extended waiting times, conflicting domestic or agricultural duties, and reduced perceived value of clinic visits when injections or complementary services were unavailable collectively discouraged consistent attendance. Social factors such as pregnancy-related stigma and closely spaced births further influenced selective participation, with some caregivers prioritizing younger children over older ones.

Decision-making dynamics were largely maternal, with mothers bearing primary responsibility for clinic attendance and record keeping, while fathers and extended family members played supportive or, at times, discouraging roles. Gender norms that framed immunization spaces as predominantly female limited male engagement and indirectly affected household support. Experiences with health workers were mostly positive and characterized by respectful communication, which reinforced trust and continuity; however, occasional service delivery challenges, including overcrowding and administrative errors, generated anxiety and could weaken motivation.

Community support mechanisms—particularly peer encouragement among women and the involvement of community volunteers—served as important facilitators of vaccination completion. Participants consistently proposed practical improvements such as expanding outreach services, increasing the number of vaccination points, reducing waiting times, strengthening reminder systems, and enhancing male involvement. Overall, the results underscore that vaccination dropout is primarily a continuity and access challenge shaped by intersecting informational, social, and systemic determinants rather than a lack of general acceptance of immunization.

Conclusion

Vaccination dropout in The Gambia persists despite high initial uptake because completion is shaped by an interplay of behavioral, social, and systemic factors rather than simple refusal or lack of awareness. Caregivers generally value vaccination and trust health workers, but incomplete knowledge about full schedules, fear of side effects, and exposure to misinformation undermine consistency. Structural barriers—distance, long clinic waiting times, and service inefficiencies—further erode motivation, particularly for women balancing heavy domestic and economic responsibilities. Gender norms limit shared responsibility, while pregnancy-related stigma and selective attendance contribute to missed later doses.

Tailored public health interventions towards the awareness creation for all mothers attending maternal and child health services on vaccination schedules and the importance of childhood vaccination completion are hereby recommended. Reduce waiting times and operational bottlenecks by staggering appointment times and improving client flow management, ensuring consistent availability of complementary child health services (e.g., weighing) to maintain perceived value of visits. Therefore, vaccination dropout is best understood as a continuity problem driven by convenience, confidence, and community context rather than acceptance alone. Sustainable improvement requires integrated strategies that address both demand-side perceptions and supply-side accessibility and efficiency.

Author’s Contribution

The author, local supervisor and the data expert have all contributed significantly to the planning and design of the study. The researcher (BB) conceptualized the study, led the training and field data collection, and wrote the manuscript. The local supervisor (BC) provided guidance on the methodology and supported the preparation and supervision of the study processes and provided critical input on the manuscript. The data expert (Mr. Bubacarr Jallow) led the data analysis, interpretation and validation of the findings. The author thoroughly reviewed and approved the final version of the manuscript prior to submission.

Conflict of Interest

The author hereby declares that there is no conflict of interest.

Financial Disclosure

The author hereby declares that no financial or commercial relationship influenced the conduct or outcomes of this study.

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Availability of Data and Materials

The datasets used and/or analyzed during the study can be obtained from the author upon request.

Ethics Approval and Consent to Participate

Ethical approval was obtained from the University of The Gambia Research and Ethics Committee. Permission to conduct the study was also granted by the Ministry of Health's Director of Health Services and the Regional Health Directors in Upper and Western Health Regions. In addition, written informed consent (in their own local languages) was obtained from all participants prior to data collection.

Consent for Publication

Not applicable.

Competing Interests

The author hereby declares that there are no competing interests.

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