

GENDER-RELATED FACTORS AFFECTING IMMUNIZATION AND HEALTHCARE SEEKING BEHAVIOR IN NIGERIA AND RELATED CONTEXTS

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START CENTER

STRATEGIC ANALYSIS,
RESEARCH & TRAINING CENTER

AGENDA

- 01 Project Overview & Key Takeaways
- 02 Methods
- 03 Analysis: Factors Affecting Caretakers' Decision-Making & Healthcare Journey
- 04 Analysis: Northern Nigerian Factors and Preferences
- 05 Analysis: Healthcare Seeking Behavior For Polio-Like Symptoms
- 06 Gaps, Limitations and Considerations



PROJECT TEAM



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START OVERVIEW



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The background is a dark blue overlay featuring a medical theme. It includes a white ECG line, various medical icons like a heart, cross, and pills, and a network diagram. Two hands are visible, interacting with a tablet device. The text 'PROJECT OVERVIEW' is centered in a large, bold, white font.

PROJECT OVERVIEW

PROJECT REQUEST

Review literature and gray literature to identify gender-related factors affecting immunization campaigns and healthcare seeking behaviors in Nigeria and related contexts

PROJECT OBJECTIVES



Review peer reviewed and relevant gray literature to understand the gender-related factors that affect demand for and acceptance of vaccines in Nigeria and similar geographies.



Describe gender-related factors that affect health-care seeking behaviors of caretakers with children experiencing polio- like symptoms in Nigeria and similar geographies.



Analyze findings and synthesize key learnings in a summary report to inform the creation of study instruments for research on gender-disparities in polio vaccination and health-seeking behavior.

KEY TAKEAWAYS: GENDER FACTORS AFFECTING VACCINE DEMAND AND UPTAKE

GENDER- RELATED FACTORS: CARETAKER

Women often serve as primary caretakers within families, influencing healthcare decision making and vaccine uptake. This role significantly impacts their ability to access and utilize vaccination services. Identified barriers include:

01

Caretakers' Schedules / Daily Patterns

Caretaking duties and work result in significant time and travel constraints, introducing challenges in attaining vaccination.

02

Birth Experiences

Experiences during childbirth have significant influence on women's trust and decisions regarding healthcare for themselves and their children.

03

Lack of Education and Literacy

Lower educational and literacy levels among women impacts understanding of vaccine benefits and schedules, reducing vaccine uptake.

GENDER- RELATED FACTORS: **INTRA- HOUSEHOLD**

Intra-household gender dynamics are shaped by complex societal power structures and unique family relationships. In turn, intra- household dynamics can play a critical role in influencing vaccine decisions, often introducing barriers to vaccine acceptance and access.

01

Spousal Influence

Husbands have a demonstrable influence on the healthcare decisions of their wives, impacting vaccine uptake of families based on their vaccine and healthcare beliefs and perceptions.

02

Influence of Elder Males

Elder males in positions of authority within communities, religious groups, and families have influence on opinions and decisions related to vaccination.

03

Influence of Elder Females

Elder females within the family, such as grandmothers, mothers-in-law and aunts, influence health decisions, including vaccinations, through advice and traditional practices.

04

Sex of Child

Cultural values and biases towards male vs. female children and decisions about their health can affect caregiver vaccination decisions.

GENDER- RELATED FACTORS: COMMUNITIES AND CONTEXTS

The relationships between gender and community contexts and healthcare environments have impacts on vaccine demand and uptake, particularly when looking at the gender of who is delivering care, as well as vaccine misinformation within the community.

01

Gender of Health Workers

The gender of health professionals has influence on vaccine acceptance due to individual preference or trust of practitioners of a specific gender.

02

Gender of Campaign Workers

The gender of individuals leading vaccination campaigns can affect how these initiatives are received and trusted within different communities.

03

Vaccine Misinformation

Misinformation related to the effects of vaccines on pregnancy and fertility disproportionately affects women, resulting in hesitancy and reduced vaccine uptake due to fears and misconceptions.

04

Autonomy in Decision Making and Movement

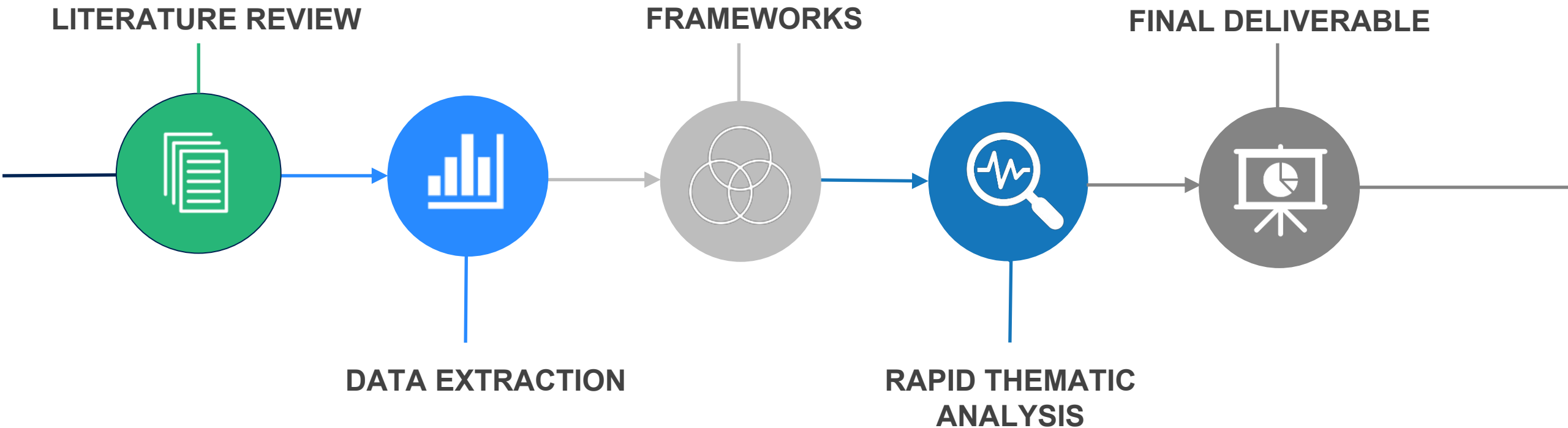
Cultural and social norms can limit women's autonomy in health-related decision-making and their freedom to travel.

METHODS

PROJECT PROCESS

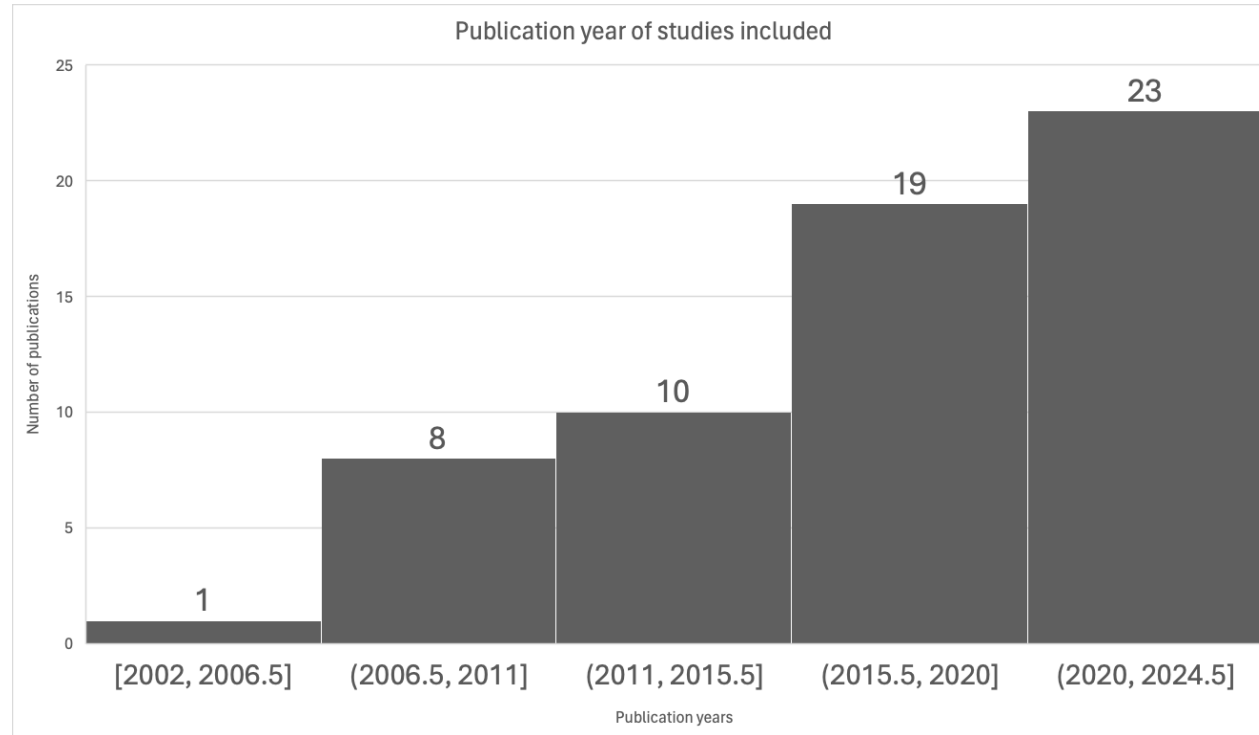
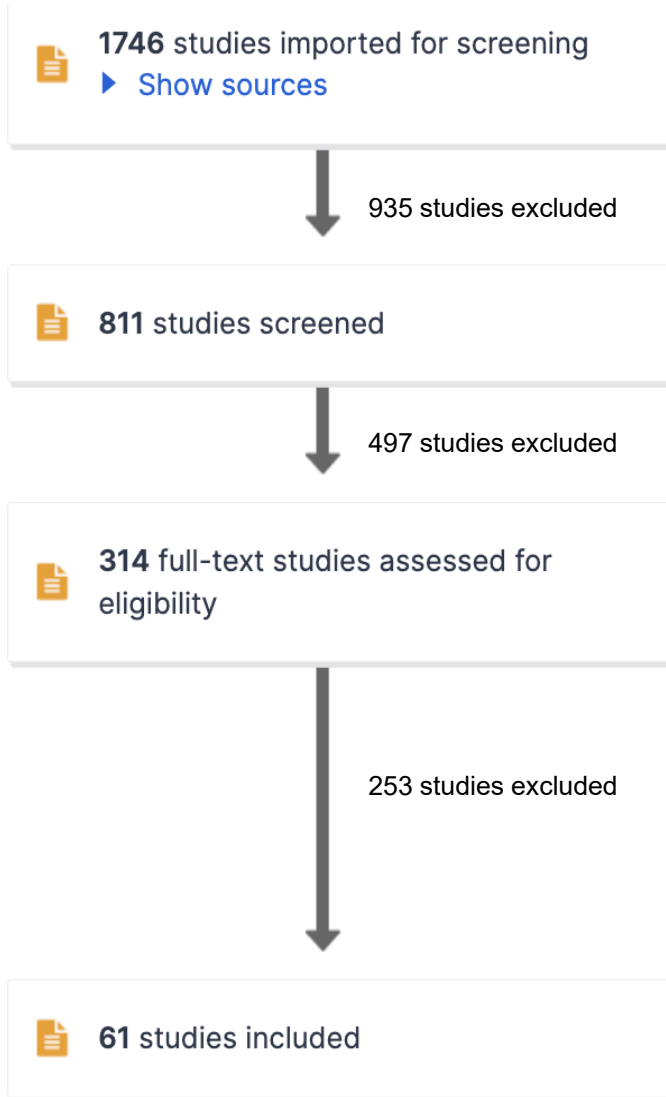
FEB 2024

MAY 2024



PROJECT PROCESS

LITERATURE REVIEW



PROJECT PROCESS



DATA EXTRACTION



Section 4: Factors Affecting Demand

Acceptance of vaccines depends on...

- ☐ Religion
- ☐ Ethnicity
- ☐ Culture
- ☐ Politics
- ☐ Education levels
- ☐ Age of mother
- ☐ Perception of value of vaccination
- ☐ Gender of children in household
- ☐ Child birth order
- ☐ Health provider gender
- ☐ Health provider type
- ☐ Presence of Skilled Birth Attendant
- ☐ Trust in healthcare, or lack there of
- ☐ Treatment options/method
- ☐ Other

Financial factors affecting accessibility include...

- ☐ Willingness to pay/ to miss wages
- ☐ Income level
- ☐ Other

Time & Space Factors affecting demand include...

- ☐ Distance to treatment
- ☐ Means of travel to treatment
- ☐ Timing of treatment
- ☐ Other

Geography of Caretaker/Child

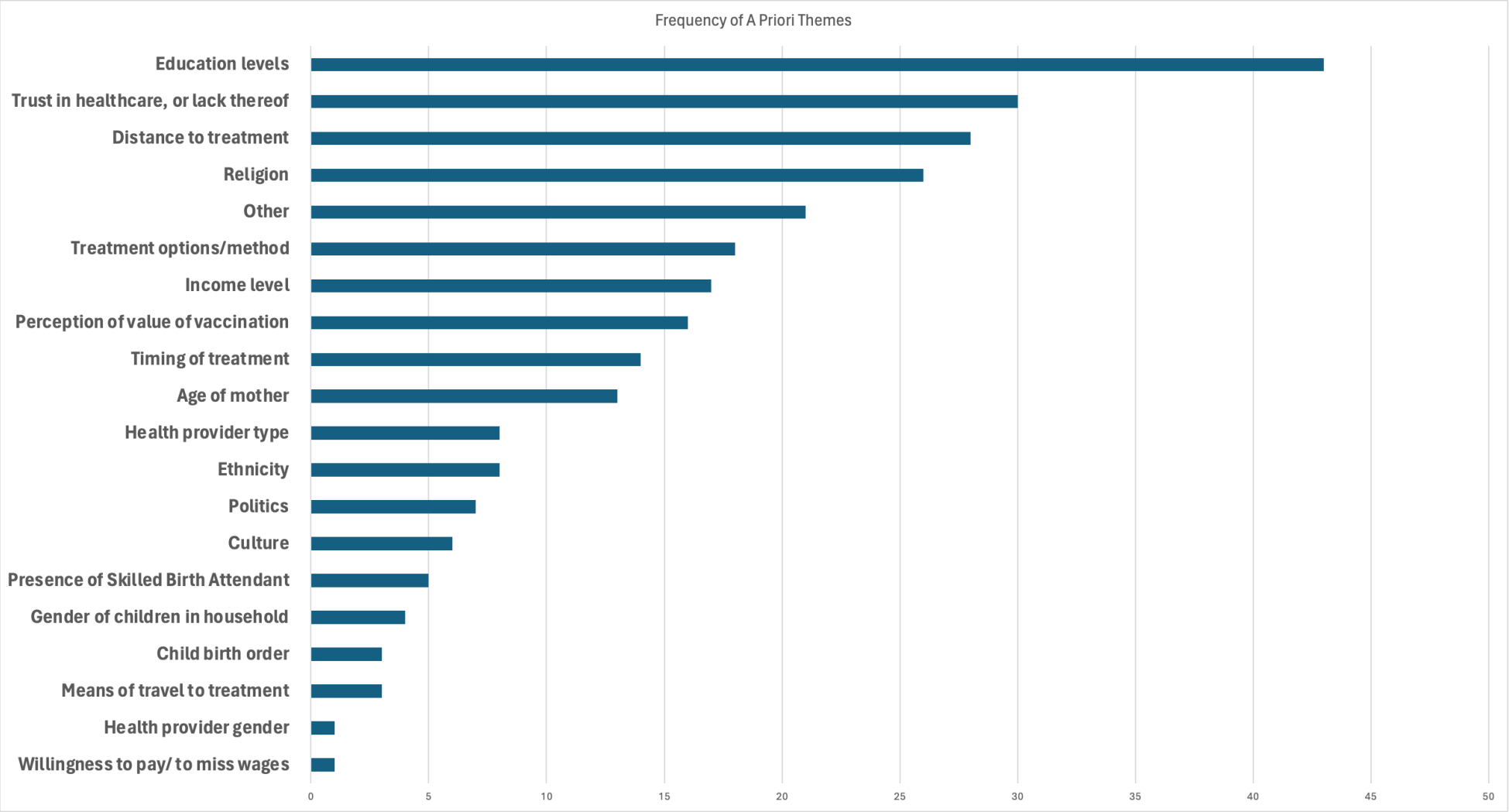
- ☐ Urban
- ☐ Rural
- ☐ Remote
- ☐ Conflict
- ☐ Refugee
- ☐ N/A

Section 5: Study Methods

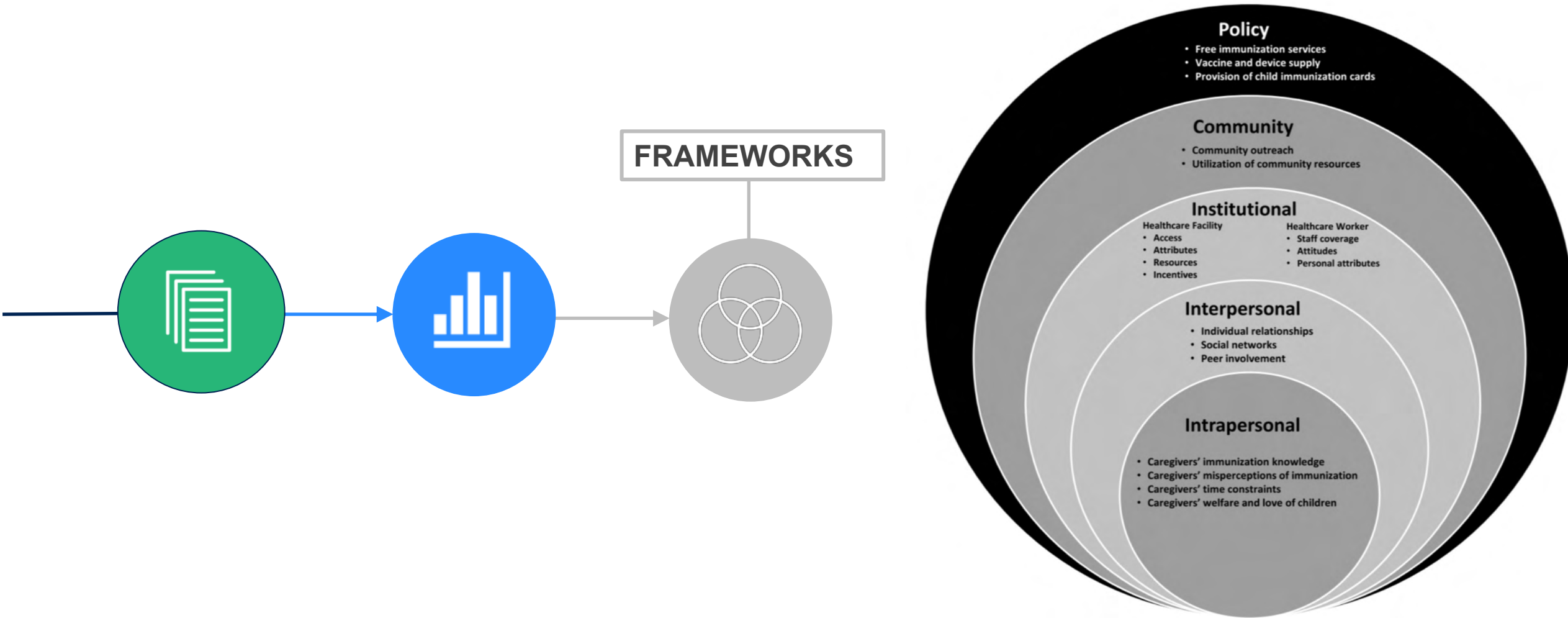
Study Design

- ☐ Quantitative
- ☐ Qualitative
- ☐ Mixed Methods

A-PRIORI THEMES SERVED AS A STEPPING STONE TOWARD DEEPER ANALYSIS



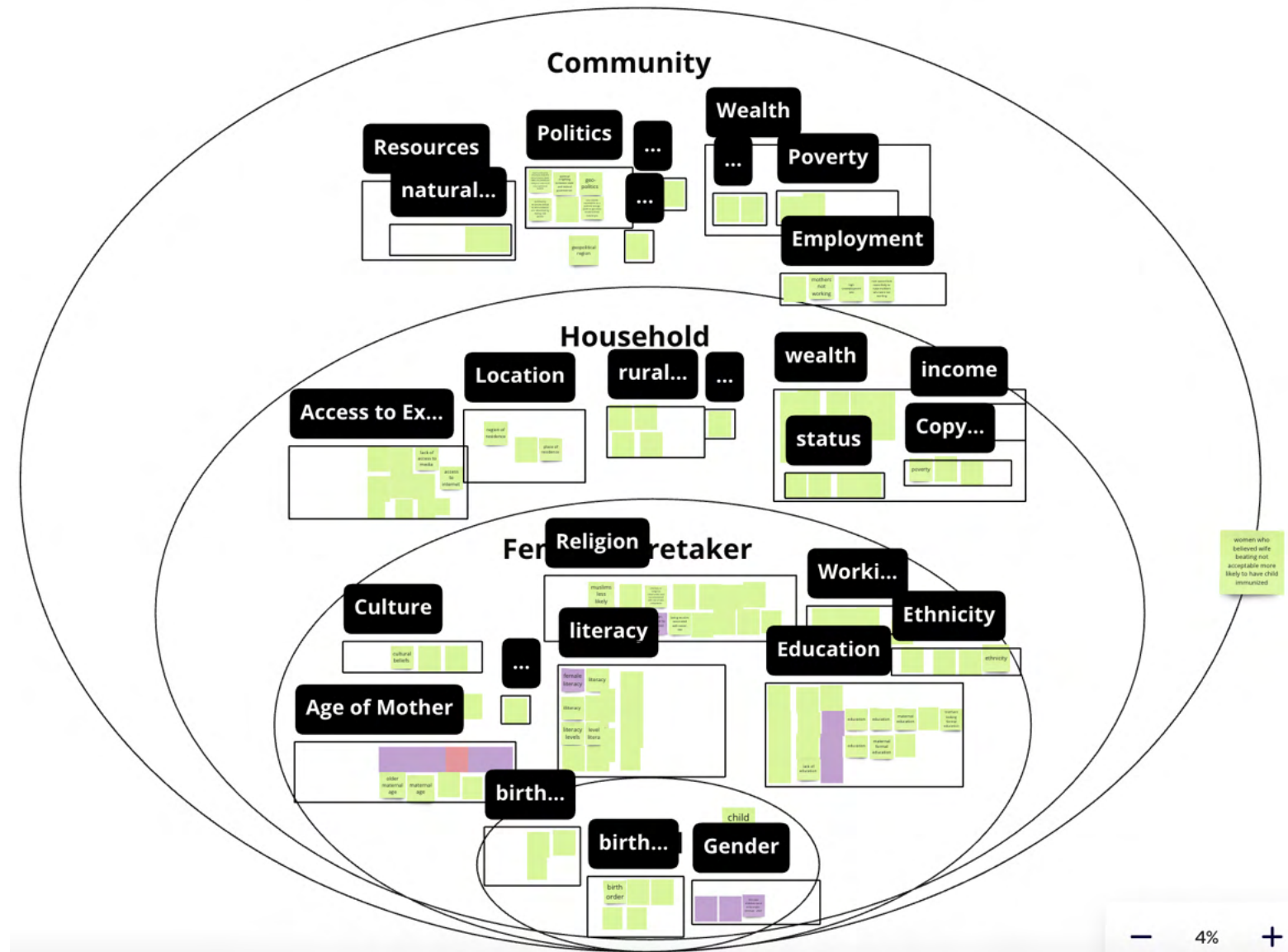
PROJECT PROCESS



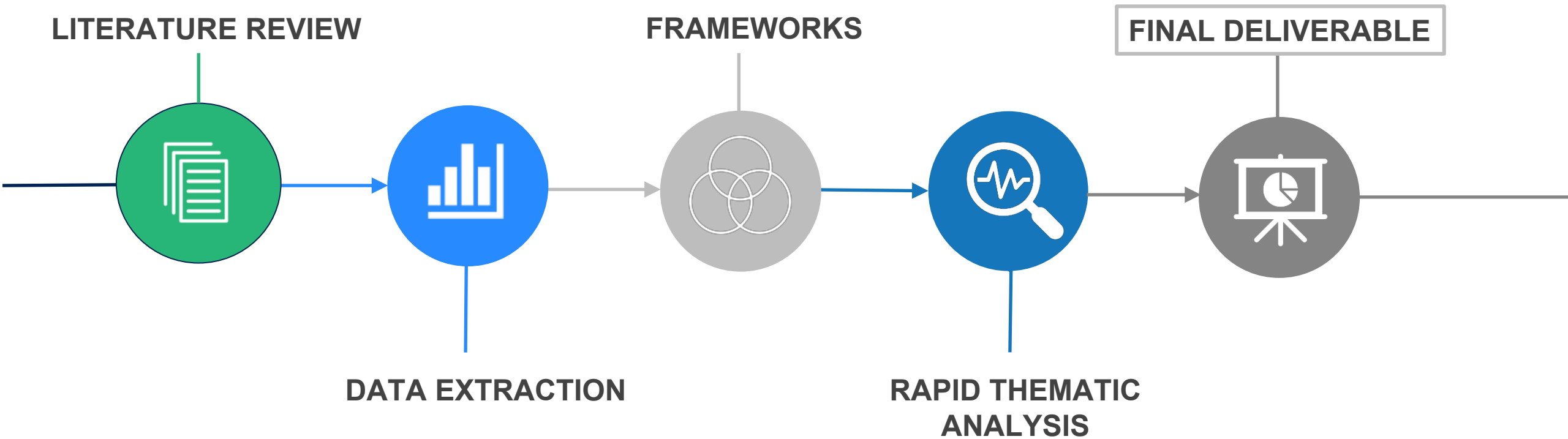
PROJECT PROCESS



RAPID THEMATIC
ANALYSIS



PROJECT PROCESS

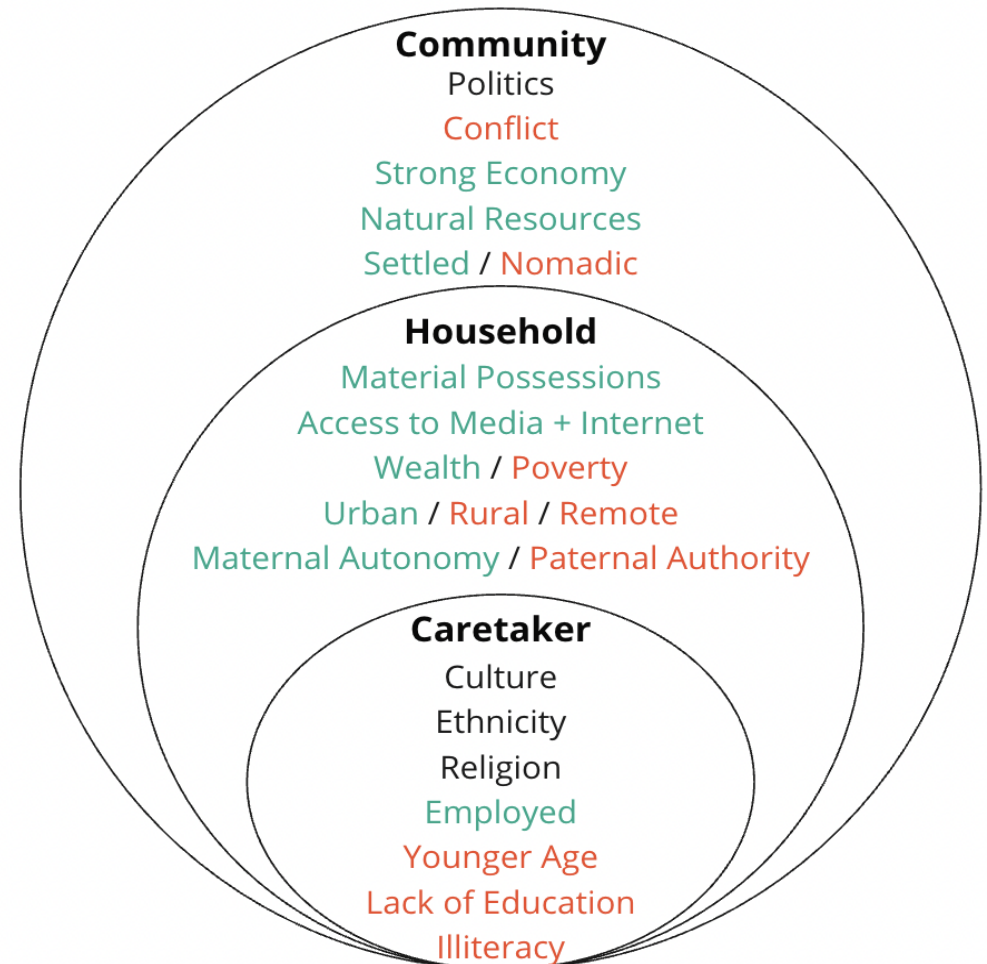


ANALYSIS: FACTORS AFFECTING CAREGIVERS' DECISION-MAKING & HEALTHCARE JOURNEY

Caretakers' Decision-Making: Contextual Factors

These factors underlie vaccine decision-making.

Factors in red were most often connected with lower child immunization rates, factors in green are associated with higher rates.



Caretakers' Decision-Making: Social Factors

Neighbors

Neighbors can fuel **rumors and gossip**, but when female neighbors are engaged in community decision making and health initiatives it can positively influence caretakers to engage.

Door-to-Door Campaign Workers

Workers sometimes cause **fatigue** by visiting often. They can also cause **confusion**: are routine immunizations not as important if they're not door to door? Why is this treatment free when other care is not?

Government

Islamic communities have felt marginalized by government and threatened by western ideals, so caregivers have at times been told to **mistrust** government-backed health initiatives.

Male Partner

Caretakers often **must defer to husbands** who dictate their actions, use of time and resources. Some **fears** of side effect, and have **religious beliefs** that god should cure illness.

Male Community Leaders

Community elders and religious figures are leaders **opinions** rule the community. Muslim leaders at times have cast vaccines, and other stakeholders, as threats to Islamic values.

Family

Senior family members including parents, in-laws, and aunts can carry **misinformation** and **negative attitudes**. Male elders are particularly influential.

Female
Caretaker

Caretakers' Decision-Making:

Maternal Factors

Knowledge of...

- Immunization benefits
- Polio symptoms
- Polio risk

Awareness of...

- Vaccine campaigns
- Availability of vaccine
- Location of medical care
- Importance of vaccines

Trust in...

- Healthcare
- Religious leaders
- Government

Perception of...

- Value of vaccines
- Access to care
- Ability to access care
- Polio in comparison to Measles, meningitis

Collective Memory of...

- Previous Outbreaks
- Past Medical Traumas*
- Past vaccine boycotts

Belief in Vaccine Myths:

- Cause HIV
- Cause Paralysis
- Cause sterility
- Not safe in pregnancy
- Harm young children
- Not needed at all
- Not allowed by Islam
- Represent western ideals
- No better than traditional healers

Belief in Polio Myths:

- Does not exist
- Is caused by spirits
- Cured by religion
- Cured with home remedy

Fears of...

- Vaccine safety
- Possible side affects

**Pfizer's 1996 Trovan trials damaged trust*

Caretaker's Healthcare Journey:

CHILDBIRTH

Antenatal care

Delivery in a Health Facility

Skilled Birth Attendant

Vaccines in Labor Room

Child's Low Birth Weight

Child's Higher Birth Order

Male Child

Lack of Post Natal Care

Mother's Desire for Child

ACCESSING CARE

Access to Transportation

Lack of Husband's Permission

Not Allowed Out of Home

Long Travel Times

Poor Travel Infrastructure

Geographic Spread

Caretaker's Availability

Previous Failed Attempt

Fear of Missed Wages

Timing of Treatment

FACILITY

Vaccines Available

Lack of Staff Coverage

Poor Waiting Rooms

No Seating Available

Poor Cooling Systems

Long Wait times

High Number of Patients

Lack Drugs, Water, etc.

Treatment Options

HEALTH WORKER

Female Provider

Knowledge on Treatment

Can Answer Questions

Judge Caretakers' Decisions

Poor Bedside Manner

Provider Type

INTERACTION

Previous Positive Interactions

Has Insurance

Has Child's Vaccine Card

Has Her Own Health Card

Incentives: Soap, Sweets, etc.

Free Treatment

Providers Demand Illicit Fees

Financial Barriers

AEFI occurrence: Fever, Crying

Perceived Medical Mistakes

Fear of AEFI occurrence

ANALYSIS: NORTHERN NIGERIAN FACTORS AND PREFERENCES

NORTHERN NIGERIA'S **DISTINCT FACTORS**

*20/61 articles were specific to Northern Nigeria,
13 specific to Polio in Northern Nigeria*

- **Insular Community with Influential Gatekeepers**
- **Perceive Vaccination as Incompatible with Beliefs**
- **Nomads have Fewer Touchpoints**
- **Politically-Motivated Barriers**
- **Fears of Infertility**



NORTHERN NIGERIA'S DISTINCT FACTORS

- **Insular Community with Influential Gatekeepers:**

Several layers of opinion leaders and gatekeepers, mostly male, heavily influence vaccine demand. The community trusts one another highly, but outsiders less so.

“...many male heads of households opposed allowing their wives to seek immunizations for their children, or opposed to immunization in general”

- (Abad 2021)

“According to the FGDs, young women appeared to resort first to the elders (older men) in the communities for answers to their immunization questions or to the members of the WDC and CDA, who then would point them to the health workers.”

- (Akwataghibe 2019)

NORTHERN NIGERIA'S DISTINCT FACTORS

"The misunderstanding (regarding resistance to the polio vaccines) was as a result of misconception of the **position of Islam on the issue**"

- Aliu Ma'awuya's, Health official (Olufowote 2022)

"...because I have not seen any quote in the Holy Quran that say immunization is good"

- [IDI, female refusal, urban] (Murele 2014)

- **Perceive Vaccination as Incompatible with Beliefs:**
Muslims, often educated in Madrasas, may believe that god should be trusted to cure and prevent illness. Husbands believe women should not interact with health providers outside home, particularly males.

NORTHERN NIGERIA'S DISTINCT FACTORS

"The northern Hausa population is very mobile, moving in and out of their home villages in Niger to work in Nigeria during the rainy season... On top of that there is a substantial **nomadic population whose movements are often poorly understood.**"

- (Cheng 2008)

"Geographic spread and seasonal migration patterns of nomadic communities significantly influence vaccination strategies"

-MMWR, August 23, 2013

- **Nomads have Fewer Touchpoints:**
Lack of service from health providers who struggle to intersect with these communities.

NORTHERN NIGERIA'S DISTINCT FACTORS

"Polio vaccinations just became a pawn in their larger strategy to secure more resources from the Federal Government."

- WHO official
(Ghinai 2013)

"They (parents of poliomyelitis susceptible children) refuse to have their children vaccinated not because they fear the vaccine, but because it is their only means of protest against a health system they feel is failing them."

- (Cheng 2008)

- **Politically-Motivated Barriers:**

Anti-polio propaganda driven by a rejection of western ideals is interwoven with conflict and violence against vaccinators which prevents access.

NORTHERN NIGERIA'S DISTINCT FACTORS

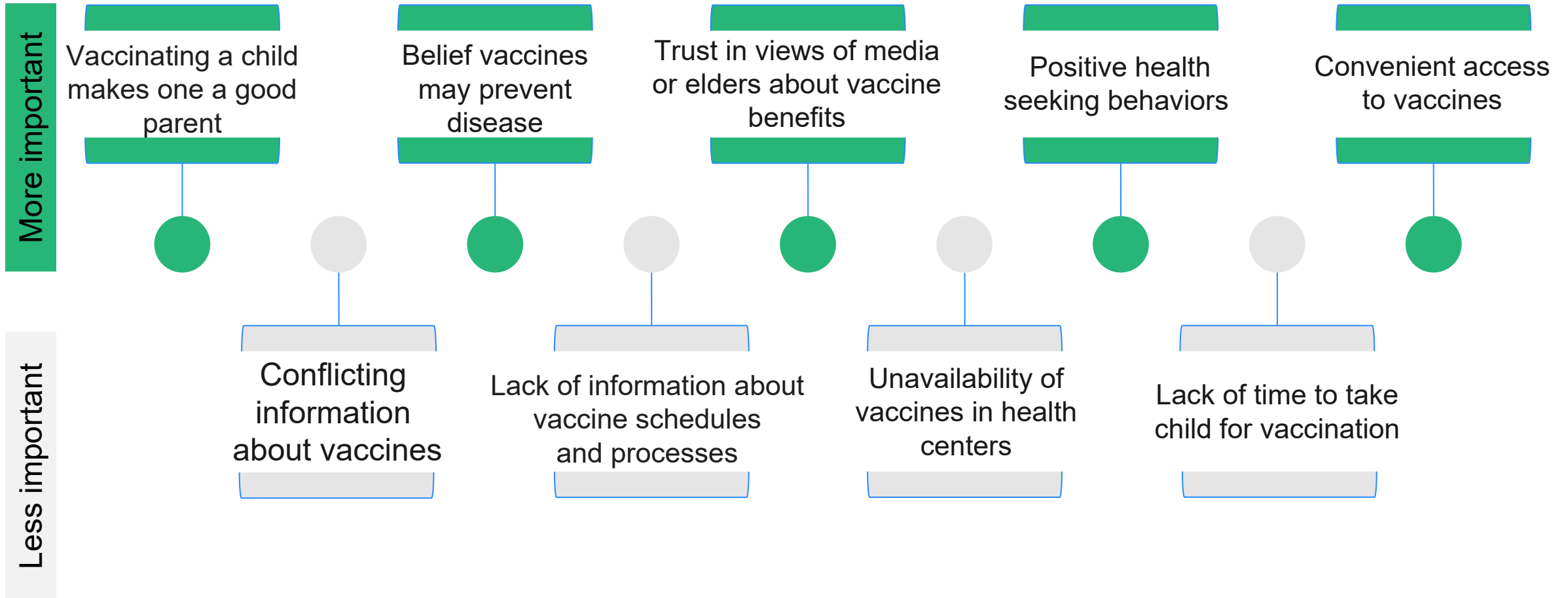
"There is still that level of nonbelief that polio exists . . . somehow people still **believe polio is linked with family planning and population control**, we have spoken to our people, most especially the Muslims to disabuse their minds that polio immunization is family planning in disguise or **a bid to reduce population.**"

-Salma Ikolo, Borno state health commissioner
(Olufowote 2022)

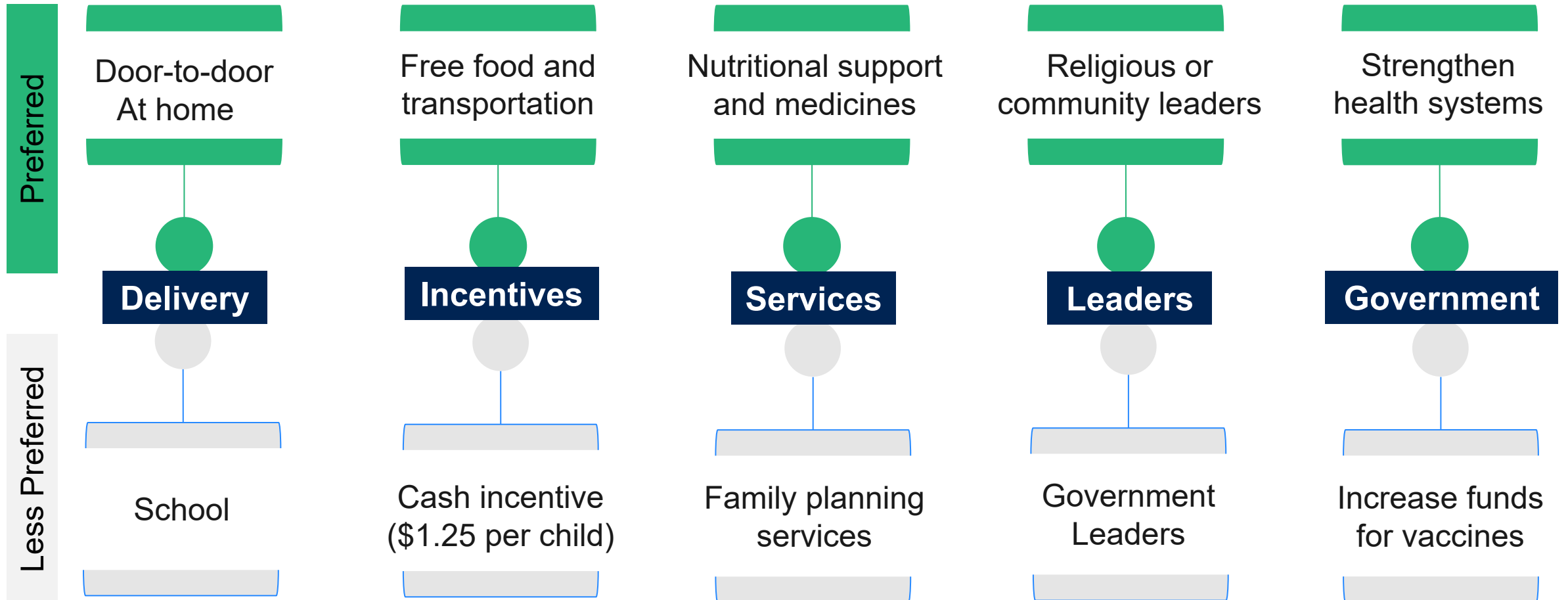
- **Fears of Infertility:**
Fear that vaccines contain family planning ingredients along with belief that Polio is caused by mystical, spiritual, witchcraft forces leads to lower motivation to be immunized.

ZAMFARA STATE HAUSAS:

IMPORTANCE OF FACTORS ON VACCINE DEMAND



ZAMFARA STATE HAUSAS: PREFERENCE



ANALYSIS: HEALTHCARE SEEKING BEHAVIOR FOR POLIO-LIKE SYMPTOMS

HEALTH SEEKING BEHAVIOR (HSB) - DISTINCT FACTORS

*4/61 articles addressed HSB for polio-like symptoms,
1/4 addressed paralytic poliomyelitis specifically.*

- **Myths remain, but beliefs may be changing**
- **First response to convulsion is unorthodox care at home**
- **Orthodox care seeking is associated with age, education, location, income**
- **Family influences care decisions**



2012 ZAMFARA STUDY PROMISING TRENDS IN CARE FOR POLIO-LIKE SYMPTOMS

Beliefs may be Changing

Though many still believe spirits and witchcraft influence convulsion, the 2012 Zamfara study showed a positive change:

64% rejected the idea that polio was a spiritual problem.

Initial Unorthodox Response at Home

Though most still lack first aid knowledge and use traditional treatments at home, the Zamfara study showed:

77% agreed best treatment for children with paralytic polio is to seek medical help from orthodox practitioners in government hospital.

Orthodox Care Factors

More education, urban residence, younger age, and higher income associated with western medicine, orthodox care, better understanding of the causes of convulsion.

The Zamfara study showed **young adults more knowledgeable about paralytic poliomyelitis**, possibly due to mass media

Family Factors

Family members are cited as a key motivator for those seeking care,

The Zamfara study noted that **grandparents were highly influential in care decisions** as they were often caretakers of disabled children.

GAPS, LIMITATIONS, AND CONSIDERATIONS

GAPS AND LIMITATIONS FROM LITERATURE



LIMITED DATA ON...

- Fulani specifically; often Fulani mentioned in conjunction with Hausa
- Gender dynamics specifically – though most touch on gender indirectly
- Door-to-door interactions versus routine interactions
- How different family structures (e.g. multiple wives) affect uptake
- Limited data on hard-to-access vulnerable populations
- Current data on political environments effects on immunization



LIMITED AVAILABILITY OF STUDY INSTRUMENTS

- Study instruments (questionnaires) are not readily available
- Focus group discussion guides unavailable

FOR CONSIDERATION:

POSSIBLE STUDY INSTRUMENT ADDITIONS

- Mothers' Pregnancy and Birth experiences
- Previous experiences/interactions with Healthcare Providers
- Perceptions of Why Adverse Events Following Immunization Happen
- Biggest Motivators toward Vaccination/ Health-Seeking Behavior
- Perceptions of Routine Immunizations vs. Door-to-Door
- Caretakers' schedules, seasonality of availability

THANK YOU



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APPENDIX

Highly Relevant Articles Which Used Qualitative Study Instruments

Healthcare Seeking Behavior:

- Factors influencing mothers' role in convulsion treatment among under-five children in Ibadan, Nigeria – Nwokocha, 2009
- Sociodemographic Factors Influencing Health Care-Seeking Behavior for Pediatric Epilepsy in Southeast Nigeria - Igwe 2022 – questionnaire referenced
- Children with paralytic poliomyelitis: a cross-sectional study of knowledge, attitudes and beliefs of parents in Zamfara state, Nigeria - Ogwumike 2012 – questionnaire referenced
- Home management of febrile convulsion in an African population: a comparison of urban and rural mothers' knowledge attitude and practice - Ofovwe 2002 – Focus Group

Hausa/ Fulani:

- Using best-worst scaling to rank factors affecting vaccination demand in northern Nigeria - Ozawa 2017 – questionnaire mentioned
- Parents' preferences for interventions to improve childhood immunization uptake in northern Nigeria. -- Ozawa 2018 – questionnaire mentioned

Gender Northern Nigeria:

- Maternal autonomy and attitudes towards gender norms: associations with childhood immunization in Nigeria - Singh 2013 – questionnaire mentioned
- Maternal reasons for non-immunisation and partial immunisation in northern Nigeria - Babalola 2011– questionnaire mentioned
- A rapid qualitative assessment of barriers associated with demand and uptake of health facility-based childhood immunizations and recommendations to improve immunization service delivery in Sokoto State, Northwest Nigeria - Abad 2021 (note: work done in 2017) - Focus groups, interviews
- Vaccine perception among acceptors and non-acceptors in Sokoto State, Nigeria - Murele 2014 – interviews
- The Excluded Voices from Africa's Sahel: Alternative Meanings of Health in Narratives of Resistance to the Global Polio Eradication Initiative in Northern Nigeria - Olufowote 2022

Types of Methods Used in Literature

- Interviews (including in-depth, community leader, questionnaire and interview combined, stakeholder, key informant, interviews with mothers, heads of households, health facilities, Key informant interviews (KII)): 18
- Literature review (including literature review, document review, systematic review, peer-reviewed material and grey literature, grey literature review, systematic search of databases): 19
- Data from Demographic and Health Surveys (DHS): 9
- Structured questionnaire: 3
- Best-worst scaling (BWS): 3
- Focus group discussion (FGD): 3
- Mobile and online survey: 2
- Secondary analyses of cross-sectional data: 2
- Case-control study design: 1
- AFP surveillance data: 1
- Bootstrap resampling: 1
- Observation instruments: 1
- Clinical information from medical records: 1
- Settlement enumeration tools and forms: 1
- Multivariable multilevel logistic regression analyses: 1
- Quantitative data from national health databases: 1
- Field census data: 1
- Community engagement strategies: 1
- Convenience sampling: 1

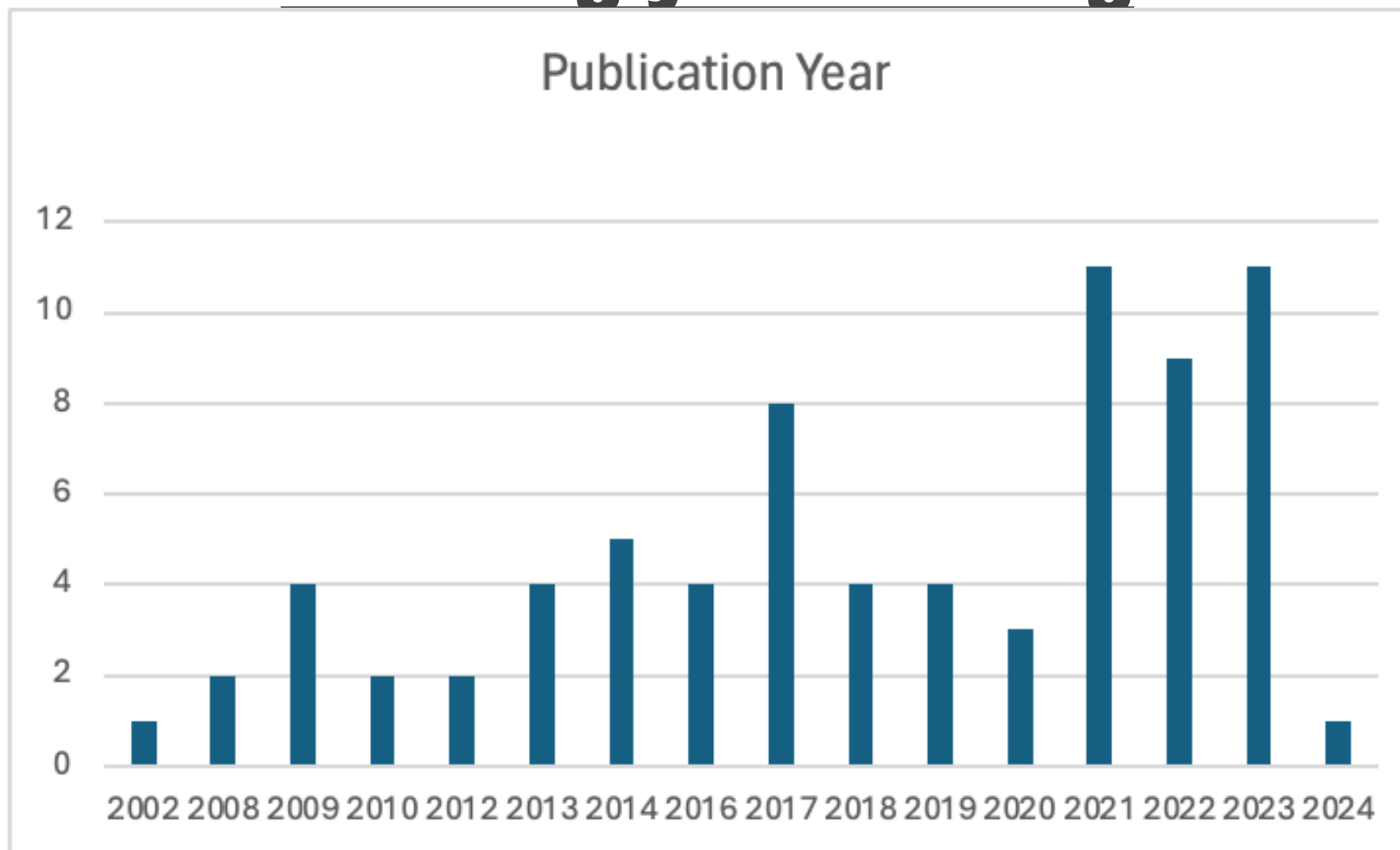
Authors Referenced Multiple Times in Lit Review:

- Stella Babalola: mentioned 2 times
- Olayinka Aderopo Obanewa: mentioned 2 times
- Rotimi Felix Afolabi: mentioned 2 times
- Sani-Gwarzo Nasir: mentioned 2 times
- Sachiko Ozawa: mentioned 2 times
- Olalekan A. Uthman: mentioned 2 times
- Sebastian Taylor: mentioned 2 times
- Elizabeth B Adedire: mentioned 2 times
- Neetu Abad: mentioned 2 times
- Matthew Ayodele Alabi: mentioned 2 times

Topics Seen in Literature Review

1. **Determinants of Vaccine Uptake:** Many studies aim to explore the factors influencing polio vaccine uptake, including socio-economic status, knowledge, attitudes, and cultural beliefs among parents and caregivers.
2. **Knowledge, Attitude, and Practices (KAP):** Several studies investigate the knowledge, attitudes, and practices of caregivers regarding the management of febrile convulsions, polio virus transmission, childhood immunization schedules, and other health-seeking behaviors.
3. **Community and Household Factors:** Factors such as religious affiliation, ethnic background, community characteristics, and household dynamics play significant roles in vaccine acceptance and coverage.
4. **Health System Factors:** The role of health systems, including vaccine supply, policy environments, and health-seeking behavior, is crucial in determining vaccine coverage and acceptance.
5. **Sociodemographic Factors:** Studies examine various sociodemographic factors such as gender, age, education, and income level in relation to vaccine uptake and coverage.
6. **Role of Stakeholders:** The involvement of stakeholders such as caregivers, community members, health workers, and religious leaders is often discussed in promoting vaccine acceptance and coverage.
7. **Barriers and Challenges:** Identifying barriers to vaccine acceptance, such as rumors, misinformation, cultural beliefs, and logistical challenges, is a common focus.
8. **Interventions and Solutions:** Studies also explore interventions and solutions to improve vaccine uptake, including targeted stakeholder engagement, community mobilization campaigns, and health system improvements.
9. **Evaluation of Programs:** Evaluating the effectiveness of vaccination campaigns, surveillance systems, and public health programs is essential for understanding their impact and identifying areas for improvement.
10. **Global Context and Lessons Learned:** Many studies aim to provide insights into global efforts for polio eradication, sharing lessons learned, progress made, challenges faced, and strategies employed in different regions.

Focus on this Issue is Seemingly Increasing



NORTHERN NIGERIA OVERALL THEMES

POLITICAL CLIMATE

- Anti-polio propaganda
- Violence against vaccinators
- Political activism through vaccine resistance
- Misaligned health priorities
- Insurgency and conflict preventing access

RELIGION CULTURE ETHNICITY

- Religious beliefs very influential
- Nomadic groups underserved
- Education often takes place in Madrasas
- People, Fathers in particular, say that only god should cure illness
- Hausa / Fulani ethnic groups (often nomadic or semi-nomadic pastoralists) were less likely to be vaccinated compared to Igbo or Yoruba ethnic groups

MATERNAL FACTORS

- Limited maternal education and literacy
- Socioeconomic status
 - Maternal Age
- Ownership of Child Health card
- ANC attendance
- Facility Delivery

INFLUENTIAL FIGURES

- Several layers of opinion leaders and gatekeepers, mostly male, in the community
- Objections from elders, religious leaders, etc. Impact acceptance
 - Vaccine decision makers were male head of households
- Religious Leaders are Key Facilitators or barriers to uptake

VACCINE PERCEPTION

- Lack of education, poor household wealth,
 - Fear of infertility
 - Fear of Western influence and agenda
- Perceived effectiveness of traditional medicine
- Perceptions that Polio is caused by mystical, spiritual, witchcraft forces

GENDER IS A DOCUMENTED BARRIER FOR IMMUNIZATION IN SOKOTO STATE

Abad et al (2021) noted the following barriers associated with demand and uptake of health facility-based childhood immunizations and recommendations to improve immunization service delivery in 2017:

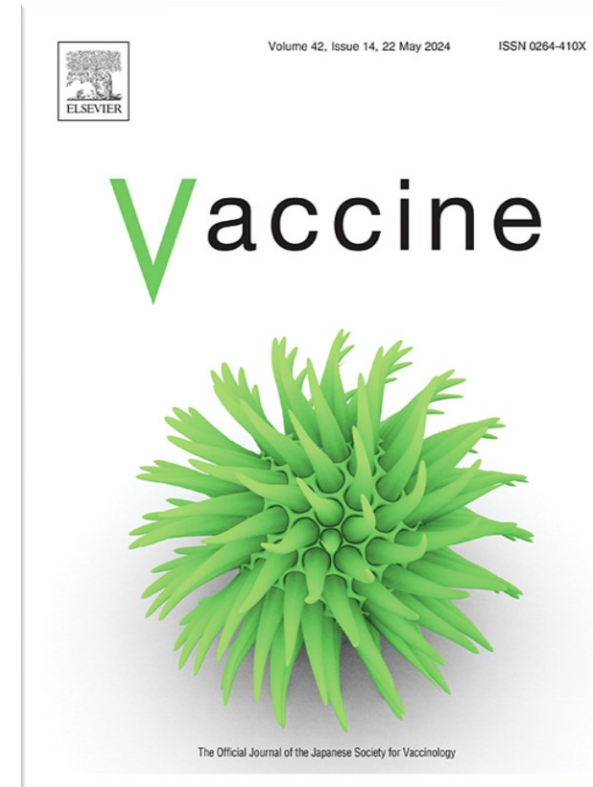
- Rumors about infertility
- Husbands permission for mothers to take children to the health facility for a variety of reasons including:
 - Objections to wives interacting with male immunization service providers, desire more female service providers
 - Religious beliefs as incompatible with immunization, believe only god can prevent onset of disease
- Key figures such as male barbers, district heads, traditional and religious leaders are highly influential in decision making and community access
- Traditional birth attendants do have access and touchpoints at which to influence caretakers, parents

Vaccine and Pan African Medical Journal

Publish Relevant Literature

Publications with multiple relevant articles:

- Vaccine: 9 articles
- Pan African Medical Journal: 8 articles
- BMC Public Health: 5 articles
- PLoS One: 4 articles
- Human Vaccines & Immunotherapeutics: 3 articles
- Journal of Infectious Diseases: 2 articles
- Lancet: 2 articles



Sources of Data and Methods: Mixed methods and data sources

Literature review: 19

Demographic and Health Survey data: 9

Secondary analyses of cross-sectional data: 2

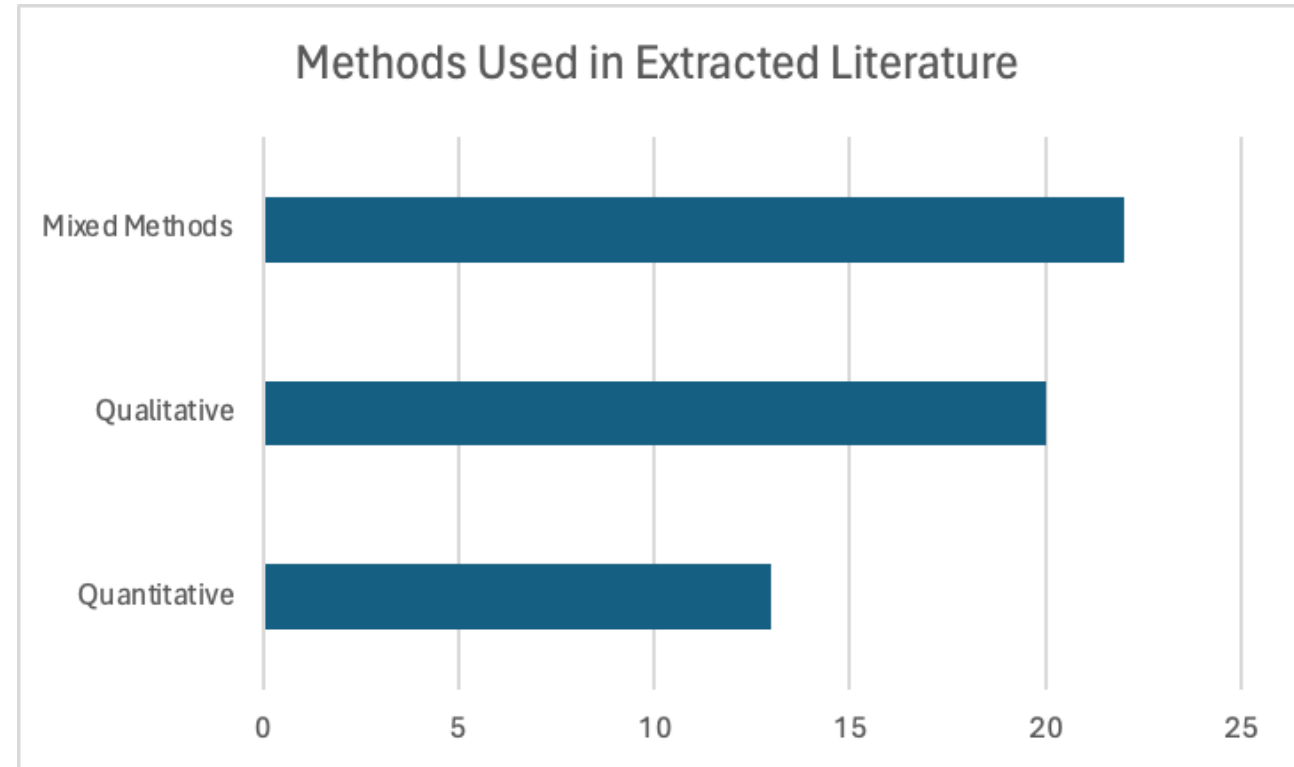
Interviews: 18

Structured questionnaire: 3

Mobile and online survey: 2

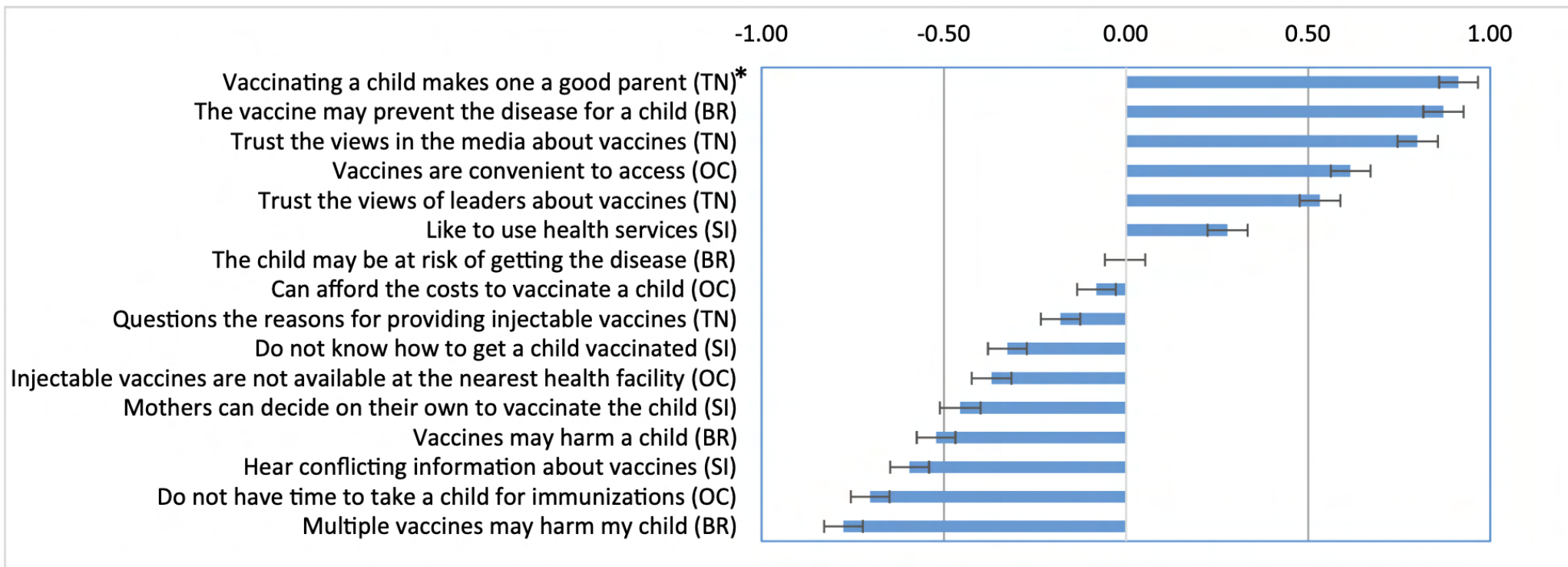
Focus group discussion: 3

Best-worst scaling: 3



ZAMFARA STATE HAUSAS RANKED TRUST AND NORMS AS HIGHER IMPORTANCE WHEN DECIDING TO VACCINATE

The majority of respondents were ethnic Hausa (95%) receiving education only from Madrasas offering Islamic education (72%).



Note: Rankings denote the relative importance of each factor based on how frequently it was selected as the most or least important attribute in childhood vaccination decisions.

* Groupings: BR – Perceived benefits and risks; SI – Healthcare services and vaccine information; TN – Trust and norms; OC – Opportunity costs

Fig. 3. Reasons to vaccinate children, best-worst scaling rankings among parents.

ZAMFARA STATE HAUSAS INDICATE PREFERENCE FOR RELIGIOUS LEADERS' INVOLVEMENT AND DOOR-TO-DOOR INTERVENTIONS

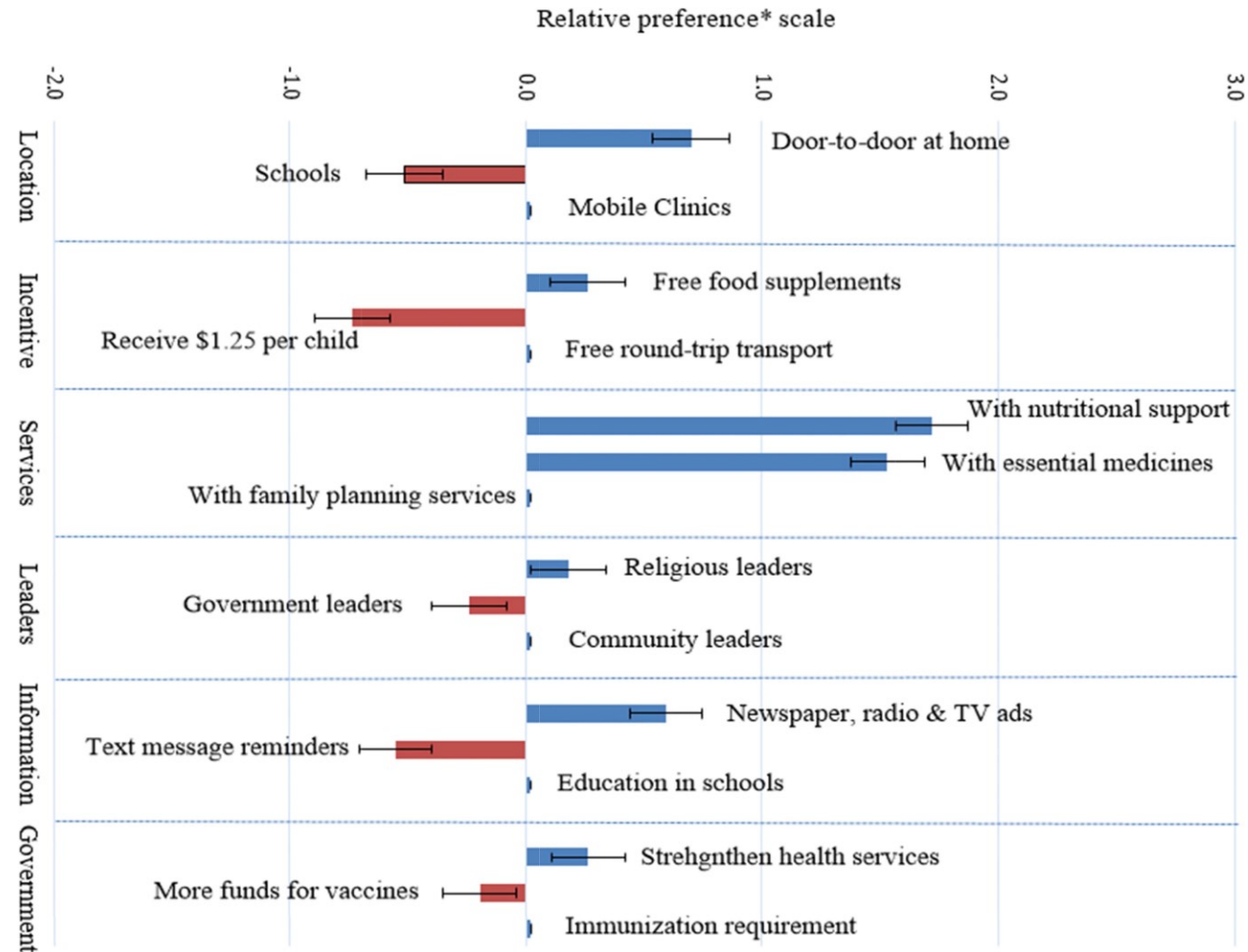


Fig. 2. Preference for Intervention Attributes based on BWS Scores. *Higher values indicate the attribute was more often chosen as the best, whereas lower values denote the attribute was chosen more often as worst.

ZAMFARA STATE HEALTHCARE SEEKING BEHAVIOR

Ogwumike *et al. BMC Public Health* 2012, **12**:888
<http://www.biomedcentral.com/1471-2458/12/888>

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Table 4 Respondents' beliefs about children with paralytic poliomyelitis

Item-statements	True	False
	n (%)	n (%)
Children with paralytic polio have spiritual problem with witches and or evil people.	77 (35.5)	140 (64.6)
Children from poor homes usually have para-lytic polio	32 (14.7)	185 (85.3)
Children with paralytic polio should be allowed to die to prevent further transmission.	22 (10.1)	195 (89.8)
Children from religious households do not have paralytic polio.	20 (9.2)	197 (90.8)
Most children infected with polio have no symptoms.	39 (18.0)	178 (82.1)
Children may pass polio infection through their feaces.	132 (60.8)	75 (39.1)
Polio immunization for children can cause other problems for example sterility.	48 (22.1)	169 (77.9)
Only one out of every 150 children infected with polio will become paralyzed.	57 (26.3)	160 (73.8)
Children with paralytic polio lose the strength in their limbs and become weak	71 (32.7)	146 (67.2)
Best treatment option for children with paralytic polio is spiritual healing.	34 (15.7)	183 (84.4)
Best treatment option for children with paralytic polio is trado- medical or alternative therapy.	58 (26.7)	159 (73.3)
Best treatment option for children with paralytic polio is to seek medical help from orthodox medical practitioners in a government hospital.	167 (77.0)	50 (23.1)

Additional information, Healthcare Seeking Behavior:

<u>Beliefs may be Changing</u>	<u>Unorthodox at Home</u>	<u>Orthodox Care Factors</u>	<u>Family Factors</u>
<p>A 2002 study from Edo state show 75% of rural participants and 28% of urban participants believe that witchcraft or evil spirits cause febrile convulsion. Another study in Ibadan showed belief that convulsion was caused by spiritual attack.</p> <p>That said, one study in Zamfara in 2012 documented a reduction in that belief:</p> <p>64% rejected the idea that polio was a spiritual problem.</p>	<p>Studies show a lack of first aid knowledge, instead opening the mouth, using urine, oils, and herbs.</p> <p>Those in a 2022 epilepsy study who sought unorthodox treatment outside the home did so because of the cost of care and the belief in the traditional care.</p> <p>The Zamfara study also , showed that while traditional and unorthodox treatment</p> <p>77% agreed best treatment for children with paralytic polio is to seek medical help from orthodox practitioners in government hospital.</p>	<p>Studies showed that more education, urban residence, younger age, and higher income were associated with the use of western medicine, the use of orthodox care as the first point of care outside the home, and better understanding of the causes of convulsion</p> <p>The Zamfara study showed young adults more knowledgeable about paralytic poliomyelitis, possibly due to mass media exposure.</p>	<p>The 2022 study in the southeast of Nigeria noted that those who sought tertiary care were most motivated by healthcare workers and by their family and relations.</p> <p>The 2009 Ibadan study noted that mothers in law promoted myths that the use of urine could cure convulsion.</p> <p>The Zamfara study noted that grandparents were highly influential in care decisions as they were often caretakers of disabled children and thus were.</p>

PERSPECTIVES ON HSB IN NIGERIA

"This study reveals a **widespread lack of knowledge** of the cause of febrile convulsion and its home management among mothers, especially those in the rural areas."

(Ofovwe, 2002)
Edo State, Febrile
Convulsion

It has become clear that **male domination as it affects critical decision making** during emergencies related to child health is inconsistent with present-day reality. The study argues quite forcefully that reduction in childhood deaths and in particular those associated with convulsion can be achieved with socio-economic and cultural empowerment of women.

(Nwokocha, 2009)
Ibadan, Convulsion

"Majority of Hausa/Fulani parents of children with paralytic poliomyelitis in north-west Nigeria had good knowledge and a positive attitude concerning the condition of their children. "

(Ogwumike, 2012)
Zamfara, Paralytic
Poliomyelitis

"While 50% of these caregivers did not seek any home treatment for seizures, the other half offered various types of unorthodox home treatments. There is a need to strengthen the primary and secondary levels of care through continuous medical education of health workers... "

(Igwe, 2022)
Anambra State, Epilepsy