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MATERNAL HEALTH OUTCOMES AND CULTURAL BIRTH PRACTICES: A COMPARATIVE STUDY OF NIGER AND BANGLADESH

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ABSTRACT

Achieving SDG 3 (Good Health and Well-Being) requires reducing the global maternal mortality ratio (MMR) to less than 70 per 100,000 live births by 2030 (Target 3.1). Sub-Saharan Africa and South Asia account for 86 percent of global maternal deaths, with Niger (MMR 441 per 100,000, lifetime risk 1 in 27) and Bangladesh (MMR 123 per 100,000, lifetime risk 1 in 230) representing contrasting trajectories within high-burden regions. Niger, a low-income Sahelian country, has one

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of the highest MMRs globally, while Bangladesh, a lower-middle-income country, has achieved a 70 percent reduction since 2000 (from 434 to 123).

This study conducts a comparative analysis of maternal health outcomes and cultural birth practices in Niger and Bangladesh, two countries with high fertility rates, low skilled birth attendance, and strong traditional birth practices, but diverging policy successes. Bangladesh's success is attributable to sustained political commitment, community-based health workers, conditional cash transfers, midwifery scale-up, emergency transport, female education, and family planning. Niger's stagnation is explained by fragile political context, weak health system, low female education, very high fertility, early marriage, and weak community health workforce.

Using a qualitative comparative case study methodology, the study analyzes secondary data from government reports, WHO and UNICEF databases, peer-reviewed literature, and program evaluations over the period 2000 to 2025. The study concludes that maternal mortality can be reduced rapidly even in low-income contexts (as demonstrated by Bangladesh) with sustained political commitment, community-based health workers, skilled birth attendance scale-up, conditional cash transfers, and family planning. Recommendations for both countries and the international community are provided.

Keywords: Maternal mortality; Niger; Bangladesh; SDG 3; traditional birth attendants; skilled birth attendance; community health workers; conditional cash transfers

RÉSUMÉ

Atteindre l'ODD 3 (Bonne santé et bien-être) nécessite de réduire le taux de mortalité maternelle mondial à moins de 70 pour 100 000 naissances vivantes d'ici 2030. Le Niger (PIB par habitant 580 USD) a un ratio de mortalité maternelle de 441 pour 100 000 (risque à vie 1 sur 27). Le Bangladesh (PIB par habitant 2 500 USD) a un ratio de 123 pour 100 000 (risque à vie 1 sur 230) – une réduction de 70 pour cent depuis 2000. Cette étude compare les résultats en matière de santé maternelle et les pratiques d'accouchement culturelles au Niger et au Bangladesh. Le Bangladesh a réussi grâce à un engagement politique soutenu, des accoucheuses qualifiées (sages-femmes), des programmes communautaires (agentes de santé), des transferts monétaires conditionnels, un transport d'urgence, l'éducation des filles et la planification familiale. Le Niger est confronté à une

forte fécondité (6,9 enfants par femme), un faible accouchement qualifié (39 pour cent), un mariage précoce (76 pour cent), et des barrières culturelles. L'étude conclut que la mortalité maternelle peut être réduite rapidement même dans les contextes à faible revenu. Des recommandations sont fournies pour les deux pays et la communauté internationale.

Mots-clés : mortalité maternelle, Niger, Bangladesh, ODD 3, accoucheuses traditionnelles, accouchement qualifié, agents de santé communautaires, transferts monétaires conditionnels

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1. INTRODUCTION

Achieving SDG 3 (Good Health and Well-Being) requires reducing the global maternal mortality ratio (MMR) to less than 70 per 100,000 live births by 2030 (Target 3.1). Sub-Saharan Africa and South Asia account for 86 percent of global maternal deaths (WHO, 2023). Niger, with an MMR of 441 per 100,000 and a lifetime risk of maternal death of 1 in 27, and Bangladesh, with an MMR of 123 per 100,000 and a lifetime risk of 1 in 230, represent contrasting trajectories within high-burden regions. Bangladesh has achieved a remarkable 70 percent reduction since 2000 (from 434 to 123), while Niger's reduction has been slower, falling from 700 in 2000 to 441 in 2020 (a 37 percent reduction).

Both countries share high fertility rates (though Bangladesh has dramatically reduced its fertility rate), low skilled birth attendance, and strong traditional birth practices with traditional birth attendants (TBAs) attending many births. However, Bangladesh's policy successes offer important lessons for Niger and other high-mortality countries.

This study conducts a comparative analysis of maternal health outcomes and cultural birth practices in Niger and Bangladesh.

Niger, a low-income Sahelian country with a population of 25 million and GDP per capita of $580, has the highest total fertility rate in the world at 6.9 children per woman. Maternal mortality in Niger is driven by very high fertility (which increases lifetime risk), low skilled birth attendance (39 percent), low facility delivery (35 percent), early marriage (76 percent of girls married before 18), high prevalence of female genital mutilation or cutting in some regions (up to 20 percent), and traditional birth attendants attending 60 percent of births. Cultural birth practices in Niger include a strong preference for home birth (65 percent), TBA-led birth with herbal remedies, massage, and positioning; dietary restrictions during pregnancy (taboos on eggs, meat, fish, and milk, which are believed to cause large babies and difficult labor); postpartum confinement of 40 days (sortie de couche) with seclusion, special baths, and sexual abstinence; and decision-making authority held by the husband and mother-in-law.

Bangladesh, a lower-middle-income country with a population of 170 million and GDP per capita of $2,500, has reduced its MMR by 70 percent since 2000. Drivers of this success include sustained political commitment, a community-based health workforce of female community health workers (Shasthya Shebika and Shasthya Kormi), skilled birth attendance scale-up (midwives trained from traditional dais), conditional cash transfers (Maternal Health Voucher Scheme), emergency obstetric transport, female education (primary enrollment of 98 percent, secondary enrollment of 70 percent), family planning (modern contraceptive prevalence of 62 percent), and poverty reduction. Cultural birth practices in Bangladesh include traditional birth attendants (dais) who historically attended 90 percent of births (now reduced, with 40 percent of births attended by formal midwives and 40 percent by trained dais); a declining preference for home birth; traditional practices such as warm compresses, oil massage, the squatting position, and cord care using herbal paste or ash; and postpartum confinement of up to 40 days (dasher bhasha) with special foods and rest.

The contrast between Niger and Bangladesh illuminates critical questions for maternal health, cultural birth practices, and SDG 3, which this study addresses.

2. LITERATURE REVIEW

The literature on maternal mortality reduction, as documented by WHO, UNFPA, and the World Bank, identifies key interventions including skilled birth attendance, emergency obstetric care (EmONC), family planning, antenatal care, postpartum care, and safe abortion services.

2.1 Bangladesh's Maternal Health Success

Bangladesh's success is well documented in the literature. Chowdhury et al. (2013) described the "Bangladesh paradox" of exceptional health achievement despite economic poverty. El Arifeen et al. (2014) conducted a countdown to 2015 country case study, identifying community health workers, conditional cash transfers, and midwifery training as key success factors. The National Maternal Mortality Survey (IIPS, 2021) documented the decline in MMR from 434 in 2000 to 123 in 2020. Amin and Tecklehaimanot (2016) analyzed BRAC's community health worker program (Shasthya Shebika), noting that 50,000 female community health workers have been trained since 1977, providing door-to-door family planning, maternal health, and nutrition services.

The Maternal Health Voucher Scheme, introduced in 2006, has been evaluated extensively. Studies show that conditional cash transfers have increased facility delivery, reduced financial barriers, and improved maternal health outcomes. The midwifery training program, introduced in 2010, has trained more than 5,000 midwives through an 18-month diploma program, with deployment to rural health facilities.

2.2 Niger's Maternal Health Challenges

The literature on Niger's maternal health (INS, 2012, 2020; Garba & Moutari, 2016; Ousseini, 2019) documents high fertility, low facility delivery, high prevalence of traditional birth attendants, and early marriage. Garba and Moutari (2016) identified weak health system infrastructure, low EmONC coverage (only 25 percent of facilities have basic EmONC), and insecurity in regions such as Diffa and Tillabéri as major barriers. Ousseini (2019) studied traditional birth attendants in Niger (matrones), noting that 60 percent of births are attended by TBAs who lack training, supplies, and referral protocols. The government's policy of non-collaboration with TBAs has been criticized as a missed opportunity.

2.3 Comparative Studies

Comparative studies of maternal health across Niger and Bangladesh are rare. Most studies focus on either West African or South Asian contexts separately. This study fills that gap by providing a structured comparison of Niger and Bangladesh.

3. RESEARCH QUESTIONS

This study addresses the following research questions:

1. What are the maternal health outcomes (MMR, skilled birth attendance, facility delivery, fertility) in Niger and Bangladesh?
2. What cultural birth practices (traditional birth attendants, dietary taboos, postpartum practices, decision-making authority) exist in each country?
3. What policies have been implemented in each country, including community health workers, conditional cash transfers, midwifery training, and family planning?

4. METHODOLOGY

This study employs a qualitative comparative case study methodology to examine maternal health outcomes and cultural birth practices in Niger and Bangladesh. The comparative approach is appropriate for examining how different economic, cultural, and policy contexts shape maternal health outcomes. Niger and Bangladesh were selected as cases offering maximum variation, also known as a most-different systems design. Niger is a low-income Sahelian country in West Africa with a population of 25 million, a high fertility rate of 6.9 children per woman, and a high maternal mortality ratio of 441 per 100,000 live births. Bangladesh is a lower-middle-income country in South Asia with a population of 170 million, a low fertility rate of 2.0 children per woman, and a maternal mortality ratio of 123 per 100,000 live births, representing a 70 percent reduction since 2000. Despite their differences, both countries share historically high fertility rates, low skilled birth attendance, and strong traditional birth practices with traditional birth attendants attending a large proportion of births, while their contrasting policy successes make them ideal for comparative analysis. The research design integrates secondary analysis of multiple data sources spanning the period 2000 to 2025. Government sources include the Ministry of Health, the National Institute of Statistics, and Demographic and Health Surveys for both countries, as well

as the National Maternal Mortality Survey for Bangladesh. International databases include the WHO Global Health Observatory, UNICEF maternal health databases, the World Bank World Development Indicators, and UNFPA maternal mortality estimates. Peer-reviewed literature from journals including The Lancet, Global Health Action, the Journal of Global Health, and the African Journal of Midwifery and Women's Health was also analyzed, along with program evaluations of BRAC's community health worker program, Bangladesh's Maternal Health Voucher Scheme, and Niger's ASBC community health worker program. The analytical framework examines five dimensions: maternal mortality trends, including MMR levels, reduction rates, and lifetime risk; health system interventions, including skilled birth attendance, facility delivery, EmONC coverage, caesarean section rates, antenatal and postnatal care, and family planning; cultural birth practices, including traditional birth attendants, dietary taboos, postpartum confinement, and decision-making authority; policy interventions, including conditional cash transfers, community health workers, midwifery training, female education, and emergency transport; and outcomes, including fertility rates, contraceptive prevalence, and female literacy. Data were extracted from the sources listed above and organized into comparative tables, with analysis following a thematic approach using the Three Delays Model (Thaddeus and Maine, 1994) as a conceptual framework to understand delays in seeking care, reaching a facility, and receiving care at a facility. The study has several limitations, including reliance on secondary data constrained by availability, quality, and comparability, with data from conflict-affected regions in Niger being incomplete. The comparative case study design cannot establish causality as rigorously as experimental methods, no primary data collection was conducted, and the study period does not fully explore longer-term historical dynamics.

5. RESULTS

Table 1: Comparative Summary – Maternal Health Outcomes

Dimension	**Niger**	**Bangladesh**
Population (2024)	25 million	170 million
GDP per capita (USD)	$580 (low-income)	$2,500 (lower-middle)
MMR (2020, WHO)	441 per 100,000	123 per 100,000

MMR reduction (2000-2020)	37% (700 to 441)	70% (434 to 123)
Lifetime risk of maternal death	1 in 27	1 in 230
Skilled birth attendance	39%	60%
Facility delivery	35%	60% (increased from 40%)
Cesarean section rate	4%	25% (range 18-30%)
Antenatal care (4+ visits)	45%	65%
Postnatal care (2 days)	20%	45%
Total fertility rate	6.9	2.0 (down from 6.5 in 1975)
Modern contraceptive prevalence	15%	62%
Female literacy (15-24)	15%	85%
Adolescent birth rate (15-19)	150 per 1,000	80 per 1,000
Early marriage (<18)	76% of girls	51% (down from 70%)
Source	DHS Niger 2012, 2020; WHO 2023	DHS Bangladesh 2014, 2018; WHO 2023

Table 2: Niger – Maternal Health and Cultural Birth Practices

Element	**Description**
MMR trends	700 (2000), 550 (2010), 441 (2020). Reduction 37%, slower than global (40%). Insecurity (Boko Haram in Diffa, ISIS-Sahel in Tillabéri) disrupts health services.
Health system interventions	Free caesarean policy (2006, 2010 – limited implementation). ASBC (Agents de Santé à Base Communautaire, trained in maternal, newborn, child health, family planning, malaria, nutrition). Midwife training (sages-femmes – 300-400 per year, not enough). EmONC coverage low (25% facilities basic EmONC).

Traditional birth attendants (TBAs – matrones)	60% of births attended by TBAs (rural, remote areas). TBAs are elderly women, respected, low-cost, accessible. Services: prenatal palpation, herbal remedies, massage, delivery (unhygienic – no sterile gloves, no clean delivery kit), cord care (butter, shea butter, herbs, ash). TBAs cannot manage hemorrhage, eclampsia, obstructed labor. Ministry policy: non-collaboration (no training, no supplies, no referral).
Dietary taboos during pregnancy	Restriction of protein-rich foods: eggs (cause large baby, difficult labor, malformations), meat (cause birthmarks, respiratory disease), fish (cause skin disease, parasites), milk (cause colic). Result: protein-energy malnutrition, anemia (prevalence 55% among pregnant women).
Postpartum practices	40-day confinement (sortie de couche). Seclusion (no leaving house, no heavy work), sexual abstinence (40 days, sometimes longer), special foods (millet porridge, soups, sweet tea), traditional massage (palper), herbal baths (sitz baths). Protective: rest, nutrition. Harmful: seclusion delays recognition of postpartum hemorrhage (if family does not check bleeding), sepsis (fever not reported).
Decision-making authority	Women lack autonomy. Husband, mother-in-law, senior woman decides: whether woman attends ANC, where to deliver (home vs facility), whether to accept referral to hospital, whether to accept caesarean. Men often not present during ANC, no male-friendly services.
Early marriage and fertility	76% of girls married before 18 (25% before 15). High fertility (6.9 children/woman) – short birth intervals (24 months), high lifetime risk (1 in 27). Family planning low (modern contraceptive prevalence 15%, many myths, fear of side effects).
Challenges	Insecurity (Diffa, Tillabéri, Tahoua – conflict, displacement). Weak health system (low EmONC coverage, drug stockouts). Low female education (85% illiterate). High fertility, early marriage. TBA non-integration. Emergency transport absent (no ambulances, women carried, walk, animal cart – delay 2).

Table 3: Bangladesh – Maternal Health and Cultural Birth Practices

Element	**Description**

MMR trends	434 (2000), 250 (2010), 170 (2015), 123 (2020). 70% reduction – one of fastest in world.
Health system interventions	Community health workers: Shasthya Shebika (BRAC – 1977, 50,000+ female community health workers, door-to-door family planning, maternal health, nutrition), Shasthya Kormi (government, 13,000+). Midwifery: 2010, Bangladesh Nursing and Midwifery Council introduced 18-month diploma midwifery program (5,000+ midwives deployed to rural health facilities – upazila health complexes, union health and family welfare centers). Community clinics (15,000+ facilities). Conditional cash transfers: Maternal Health Voucher Scheme (2006, 50+ districts – pregnant women receive vouchers for ANC, facility delivery, postnatal care, C-section, transport, receive cash incentive (BDT 3,000-5,000, $35-60). Emergency transport: community ambulance (dial 333, maternal health vouchers cover transport). Family planning: modern contraceptive prevalence 62% (pill, injectable, implant, IUD, condom), fertility reduced to 2.0. Female education: girls' secondary stipend program (1994 – cash transfers for girls attending secondary school), female literacy 85%.
Traditional birth attendants (dais)	Historically 90% of births attended by TBAs (dais). Now 40% of births by formal midwives, 40% by dais (trained through government program, integrated into community health system). Dais trained in clean delivery (sterile blade, cord tie, plastic sheet, gloves), danger sign recognition, referral. Some dais integrated as community midwives (short training, not full 18-month diploma). Policy: integration (not suppression).
Traditional birth practices (still used)	Warm compresses (perineum during second stage). Oil massage (perineal, abdominal). Squatting position (birth stool, floor). Cord care: herbal paste, ash, ghee (clarified butter), turmeric (concern: infection risk). Traditional medicines for labor induction (not safe).
Postpartum practices	"Dasher bhasha" – 40-day confinement. Seclusion, rest, special foods (rice, fish, eggs, milk, turmeric, ginger, warm liquids), no cold food/drink, no bathing, no sex. Protective: rest, nutrition, social support. Harmful: seclusion may delay complication recognition; no bathing (perineal hygiene).
Decision-making	Women have limited autonomy (rural areas). Husband, mother-in-law, senior family members decide on ANC, delivery place, referral. However, female community health

	workers (Shasthya Shebika) have increased women's knowledge, confidence, negotiation power.
Success factors	Sustained political commitment (Prime Minister Sheikh Hasina's personal advocacy – maternal health as priority). Community health workforce (BRAC's Shasthya Shebika unique model, government community clinics). Conditional cash transfers (vouchers). Midwifery scale-up (5,000+ midwives). Emergency transport. Female education and family planning (demographic transition). Poverty reduction (GDP growth 6%+ for two decades).
Challenges	Remaining disparities: north-east regions (Sylhet, Chittagong Hill Tracts, Rohingya camps – lower coverage). Quality of care (respectful maternity care, unnecessary C-section rates 30%+ in private sector, post-partum hemorrhage management gaps). Adolescent pregnancy (28% of girls 15-19 have begun childbearing – down from 80% but still high).

Table 4: Comparative Cultural Practices

Practice	Niger	Bangladesh
TBA attendance at birth	60% (non-integrated)	40% (integrated)
TBA policy	Non-collaboration	Integration (training, supplies, referral)
Dietary taboos (pregnancy)	Eggs, meat, fish, milk restricted	Less restrictive (fish, eggs encouraged)
Postpartum confinement	40 days (sortie de couche)	40 days (dasher bhasha)
Decision-making	Husband, mother-in-law	Husband, mother-in-law (but CHWs empo women)
Home birth preference	65% (declining slowly)	40% (declining rapidly)
Clean delivery kit use	Low (5%)	High (60% – through voucher scheme)
Misoprostol for PPH	Not used by TBAs	Used by trained dais, midwives

6. DISCUSSION OF RESULTS

6.1. Explaining Bangladesh's Success

Bangladesh's 70 percent reduction in MMR is attributable to several interrelated factors:

- **Sustained political commitment:** The Prime Minister's personal advocacy has kept maternal health a priority in national strategies and budget allocations.
- **Community health workforce:** BRAC's 50,000 Shasthya Shebika provide door-to-door family planning, maternal health, nutrition, and immunization services. This program is unique in its scale and effectiveness. Government community clinics (15,000) also employ community health workers.
- **Conditional cash transfers:** The Maternal Health Voucher Scheme (2006) has reduced financial barriers and increased facility delivery from 40 percent to 60 percent.
- **Midwifery scale-up:** More than 5,000 trained midwives have been deployed to rural facilities, increasing skilled birth attendance.
- **Emergency transport:** Ambulance services (dial 333) have improved access to emergency obstetric care.
- **Female education:** The girls' secondary stipend program (1994) has raised female literacy to 85 percent, delaying marriage, reducing fertility, and improving health-seeking behavior.
- **Family planning:** Modern contraceptive prevalence of 62 percent has reduced fertility from 6.5 to 2.0 children per woman.
- **Poverty reduction:** Sustained GDP growth of over 6 percent for two decades has improved nutrition, sanitation, and health access.

6.2. Explaining Niger's Stagnation

Niger's slower MMR reduction (37 percent compared to Bangladesh's 70 percent) is explained by:

- **Fragile political context:** Coups occurred in 1996, 1999, 2010, and 2023, creating instability that disrupts health policy continuity.

- **Weak health system:** EmONC coverage is low (only 25 percent of facilities have basic EmONC), there are frequent drug stockouts, health worker density is low, and insecurity (Boko Haram, ISIS-Sahel, farmer-herder conflict) has closed more than 1,500 health facilities.
- **Low female education:** With 85 percent of women illiterate, early marriage (76 percent), high fertility (6.9), and low health literacy persist.
- **High fertility:** A fertility rate of 6.9 children per woman creates a high lifetime risk of maternal death and short birth intervals leading to maternal depletion.
- **Low family planning use:** Modern contraceptive prevalence is only 15 percent, due to myths, fear of side effects, and limited access.
- **TBA non-integration:** Sixty percent of births are attended by TBAs who receive no training, supplies, or referral protocols.
- **Weak community health workforce:** The ASBC program exists but is underfunded, has low coverage, and lacks performance-based incentives.
- **No conditional cash transfers:** The free caesarean policy (2006, 2010) is poorly implemented, with informal payments and drug fees still required.
- **No emergency transport:** There are no ambulances; women are carried, walk, or use animal carts, causing dangerous delays.

6.3. Traditional Birth Attendants: Integration versus Non-Collaboration

Bangladesh's policy of integrating TBAs (dais) through training, clean delivery kits, referral protocols, and provision of misoprostol has improved the safety of home births, reduced infection, enabled recognition of danger signs, and increased referral to facilities. Niger's policy of non-collaboration leaves 60 percent of births unsafe.

Niger should adopt Bangladesh's integrated TBA model, including training TBAs in clean delivery (sterile blade, plastic sheet, chlorhexidine for cord care, gloves), danger sign recognition (hemorrhage, eclampsia, obstructed labor, sepsis, retained placenta), administration of misoprostol to prevent postpartum hemorrhage (600 micrograms orally immediately after delivery, as recommended by WHO), and referral protocols linked to community health workers.

6.4. Conditional Cash Transfers: Bangladesh's Voucher Scheme

Bangladesh's Maternal Health Voucher Scheme operates in more than 50 districts, providing pregnant women with vouchers for antenatal care, facility delivery (cash incentive of BDT 3,000 to 5,000, or 35to35*to*60), postnatal care, C-section, and transport. This reduces financial barriers related to the cost of delivery, transport, and drugs.

Niger has no conditional cash transfers for maternal health. The free caesarean policy (2006, 2010) is poorly implemented, with informal payments and drug fees still required. Niger should pilot conditional cash transfers targeting the poorest districts (Diffa, Tillabéri, Tahoua), providing vouchers for facility delivery (CFA 10,000 to 20,000, or 15to15*to*30), linked to EmONC facilities.

6.5. Community Health Workers: Bangladesh's Shasthya Shebika

BRAC's Shasthya Shebika (50,000 female community health workers) are the backbone of Bangladesh's maternal health success. They provide door-to-door family planning services (oral pills, injectable Depo-Provera, condoms), distribute clean delivery kits, refer women to facilities, and accompany women to delivery.

Niger's ASBC (Agents de Santé à Base Communautaire) program has trained 5,000 community health workers, but they are underfunded, have low motivation, receive no performance-based incentives, and have low coverage. Niger should scale up ASBC with training in family planning (injectables, implants), clean delivery, misoprostol, and referral, and implement performance-based financing with small incentives per referral and per clean delivery kit distributed.

6.6. Midwifery Training and Deployment

Bangladesh trained 5,000 midwives through an 18-month diploma program and deployed them to rural health facilities (upazila health complexes, union health and family welfare centers). Niger trains only 300 to 400 midwives per year (sages-femmes), which is insufficient for a population of 25 million (a ratio of 1 midwife per 10,000 population, compared to the WHO recommendation of 1 per 5,000).

Niger should scale up midwifery training, increasing training slots to 1,000 per year, and deploy midwives to rural health centers with incentives such as housing, rural allowances, and career progression opportunities.

6.7. Female Education and Family Planning

Bangladesh's girls' secondary stipend program (1994) increased female enrollment, delayed marriage (median age at marriage increased from 14 to 18), and reduced fertility (from 6.5 to 2.0). Niger has low female education (15 percent literacy), early marriage (76 percent of girls married before 18), and high fertility (6.9).

Niger must prioritize girls' education by banning early marriage (enforcing the existing law setting the minimum marriage age at 18, which is rarely enforced), providing cash transfers for girls attending school (stipends), and keeping girls in school through secondary level. For family planning, Niger should implement community-based distribution of contraceptives (pills, injectables, implants, IUDs) and address myths (fear of infertility, side effects, religious opposition).

6.8. Transferability: What Niger Can Learn from Bangladesh

Niger can learn several lessons from Bangladesh's experience:

- Adopt conditional cash transfers (maternal health vouchers)
- Scale up community health workers (ASBC training, performance-based financing)
- Integrate TBAs (training, clean delivery kits, misoprostol, referral)
- Train and deploy more midwives (increase numbers, rural incentives)
- Prioritize girls' education (cash transfers, enforce marriage age law)
- Expand family planning (community-based distribution, modern contraceptives)
- Implement emergency transport (moto-ambulance, community emergency funds)

Bangladesh can learn from Niger in a few limited areas. Some aspects of Niger's free caesarean policy (though poorly implemented) could inform Bangladesh's continued financial protection efforts. Niger's harmful traditional dietary taboos (eggs, meat, fish restriction) contrast with

Bangladesh's success in encouraging protein consumption (fish and eggs), which could inform Niger's nutrition education programs.

6.9. Implications for SDG 3

Maternal mortality reduction is central to SDG Target 3.1. Bangladesh demonstrates that rapid reduction is possible even in low-income contexts through sustained political commitment, community health workers, conditional cash transfers, midwifery scale-up, female education, and family planning. Niger demonstrates that without these interventions, MMR remains high.

The international community (WHO, UNICEF, UNFPA, World Bank, bilateral donors) should support community health worker programs (training, performance-based financing), conditional cash transfers for maternal health, midwifery training and deployment, girls' education (stipends, marriage age enforcement), family planning (community-based distribution), and emergency transport. South-South exchange should be promoted among Bangladesh, Niger, Ethiopia, Nepal, and Rwanda.

7. CONCLUSION

This comparative analysis reveals that maternal health outcomes and cultural birth practices in Niger and Bangladesh have diverged dramatically.

Bangladesh reduced its MMR by 70 percent from 2000 to 2020, falling from 434 to 123 per 100,000. Success factors include sustained political commitment, community health workers (Shasthya Shebika, 50,000), conditional cash transfers (Maternal Health Voucher Scheme), midwifery training (5,000 deployed), family planning (modern contraceptive prevalence of 62 percent), female education (girls' secondary stipend), and poverty reduction. Cultural birth practices in Bangladesh have evolved: traditional birth attendants (dais) have been integrated through training, clean delivery kits, misoprostol, and referral protocols; home birth is declining; and postpartum confinement (40 days) remains common.

Niger's MMR declined by only 37 percent from 2000 to 2020, falling from 700 to 441 per 100,000. Persistent challenges include very high fertility (6.9 children per woman), low skilled birth attendance (39 percent), low facility delivery (35 percent), early marriage (76 percent of girls

married before 18), low female literacy (15 percent), a weak health system (EmONC coverage of only 25 percent, insecurity), TBA non-integration (60 percent of births), no conditional cash transfers, and low family planning use (15 percent).

Several cross-cutting insights emerge from this comparison:

1. Community health workers are essential. Bangladesh's Shasthya Shebika program demonstrates the value of female community health workers providing door-to-door services.
2. Conditional cash transfers reduce financial barriers and increase facility delivery.
3. Midwifery scale-up and deployment to rural areas increase skilled birth attendance.
4. TBA integration (training, clean delivery kits, misoprostol, referral) improves the safety of home births.
5. Female education and family planning are foundational, reducing fertility, delaying marriage, and improving health-seeking behavior.

For Niger, priorities include: adopting conditional cash transfers (maternal health vouchers); scaling up community health workers (ASBC training, performance-based financing); integrating TBAs (clean delivery kits, misoprostol, referral); training and deploying more midwives (1,000 per year, rural incentives); prioritizing girls' education (cash transfers, enforce marriage age of 18); expanding family planning (community-based distribution of contraceptives); and implementing emergency transport (moto-ambulance).

For Bangladesh, priorities include: sustaining progress by addressing remaining disparities in north-east regions (Sylhet, Chittagong Hill Tracts, Rohingya camps); strengthening respectful maternity care (reducing unnecessary C-sections, improving postpartum hemorrhage management); and reducing adolescent pregnancy, which still affects 28 percent of girls aged 15 to 19.

For the international community, the lessons are clear. Maternal mortality can be reduced rapidly even in low-income contexts, as demonstrated by Bangladesh. The essential ingredients are sustained political commitment, community health workers, conditional cash transfers, midwifery scale-up, family planning, and girls' education.

The ultimate measure of success for maternal health policy is not the number of policies adopted, but whether a woman in rural Diffa (Niger) and a woman in rural Sylhet (Bangladesh) survive childbirth.

8. LIMITS OF THE STUDY

This study has several limitations:

1. Reliance on secondary data (government reports, DHS, WHO, peer-reviewed literature) means the analysis is constrained by data availability, quality, and comparability. Data from conflict-affected regions in Niger (Diffa, Tillabéri) are incomplete.
2. The comparative case study design cannot establish causality as rigorously as experimental or quasi-experimental methods.
3. The study does not include primary data collection (interviews with TBAs, midwives, community health workers, or women), which would provide richer insights.
4. The study period (2000 to 2025) captures recent trends but does not fully explore longer-term historical dynamics.
5. The focus on national-level systems obscures subnational variation within Niger (Diffa versus Niamey) and within Bangladesh (Sylhet versus Dhaka).
6. The study does not quantify the cost-effectiveness of conditional cash transfers, midwifery training, or community health worker programs.

Despite these limitations, the comparative analysis provides valuable insights for policy and future research.

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10. AUTHOR CONTRIBUTIONS

SOULEY ABDOUL DJIBO conceived the study, designed the methodology, conducted the literature review and document analysis, synthesized findings, and drafted the complete manuscript.

11. COMPETING INTERESTS

The author declares that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential competing interest.

12. FUNDING INFORMATION

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13. DATA AVAILABILITY

All sources are publicly available documents cited in the bibliography and accessible through the referenced publications and organizations (DHS Niger, DHS Bangladesh, WHO, UNICEF, World Bank).

14. DISCLAIMER

The views expressed in this article are solely those of the author and do not necessarily reflect the views of any institution or organization with which the author may be affiliated. The analysis is provided for scholarly purposes and should not be construed as policy guidance or programmatic advice.

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