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Review Article

Enabling-Resource Deficits as the Primary Driver of Incomplete Postnatal Care in Sub-Saharan Africa: A Critical Interpretive Synthesis for Nigeria

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ABSTRACT

Background: Global endorsement of the World Health Organization's (WHO) four-contact postnatal care (PNC) schedule has not translated into commensurate completion rates, particularly across sub-Saharan Africa. The prevailing model, attributing low completion to deficient maternal knowledge, is increasingly contradicted by studies reporting high awareness alongside persistently low completion.

Objective: This critical interpretive synthesis interrogates the assumed knowledge-practice relationship in PNC utilization and advances an alternative explanation using Andersen's Behavioral Model of Health Services Use.

Methods: A critical interpretive synthesis was conducted, employing iterative constant comparison and contradiction-mapping of the literature rather than sequential reporting of findings. Twenty-seven sources, including peer-reviewed primary studies, systematic reviews, and official WHO and Nigerian Demographic and Health Survey reports published between 2018 and 2026, supplemented by foundational theoretical works from 1995-2006, were retained.

Results: Maternal knowledge of danger signs and the recommended visit schedule was frequently moderate to high (50–91%), yet completion of all four WHO contacts ranged from 10% to 84.8%, varying almost exclusively with enabling conditions rather than knowledge. Divergence in completion despite comparable knowledge reflected differences in health workforce adequacy, commodity availability, physical access, and partner involvement. We argue this reflects an enabling-resource gap, not a knowledge-practice gap: predisposing knowledge is necessary but insufficient, while enabling resources gatekeep its conversion into completed utilization.

Conclusion: Interventions must shift from passive health education to active system-strengthening. The priority is to measure and mitigate enabling-resource deficits rather than maternal knowledge. Ogbomoso, Nigeria, is identified as a priority site for testing this reframed, system-centric model.

Keywords: Postnatal care completion; enabling resources; Andersen's Behavioral Model; critical interpretive synthesis; primary healthcare; Nigeria.

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INTRODUCTION

Despite decades of health education, maternal knowledge of postnatal danger signs in sub-Saharan Africa frequently exceeds 70%, yet completion of the World Health Organization's recommended four-contact schedule remains below 15% in multiple settings. This contradiction demands a fundamental reassessment of the dominant explanatory model. The postnatal period, spanning delivery of the placenta through approximately six to eight weeks postpartum, is a window of concentrated physiological, psychological, and social risk for both mother and newborn [1]. In recognition of this risk, the World Health Organization (WHO) recommends a minimum of four postnatal contacts: within the first 24 hours, at 48–72 hours, between days 7 and 14, and at six weeks postpartum [1]. Each contact targets a distinct vulnerability window, from immediate hemorrhage and infection screening to delayed danger-sign surveillance and family-planning initiation.

Despite near-universal endorsement of this schedule, completion remains stubbornly low across low- and middle-income settings. Sub-Saharan Africa reports pooled facility-based postpartum check coverage of approximately 52.5% [2], and Nigeria, which accounts for a disproportionate share of the global maternal mortality burden, records postnatal care utilization averaging only 40–50% across primary healthcare settings in the southwest [3]. Notably, subnational maternal mortality and postnatal completion data for Oyo State, where Ogbomoso is situated, are sparse; this absence of locally disaggregated evidence is itself symptomatic of the broader health-information gap this review seeks to expose, rather than a peripheral limitation to be noted in passing.

The dominant explanatory frame in the existing literature attributes incomplete postnatal care to deficient maternal knowledge of visit schedules and danger signs, a “knowledge-practice gap.” This review challenges that framing. We advance the thesis that, where it has been measured, maternal knowledge of postnatal care content is generally moderate to high, and that the more decisive and consistently undertheorized determinant of completion is the adequacy of enabling resources, health system readiness, physical access, and household decision-making structures, operating as a gatekeeper between

predisposing knowledge and completed utilization. Using Andersen's Behavioral Model of Health Services Use [4,5] as an interpretive, rather than merely descriptive, lens, this critical interpretive synthesis compares and contrasts the existing empirical record to test, and ultimately substantiate, this enabling-resource thesis, and to articulate its specific implications for primary healthcare delivery in Ogbomoso, Oyo State.

METHODS

Study Setting

This research is a critical interpretive synthesis (CIS), a recognized review methodology distinct from both unstructured narrative summary and protocol-driven systematic review [6]. Unlike a systematic review, a CIS does not aim for exhaustive retrieval of every available record on a topic; rather, it purposively samples sufficiently to support theory generation and critique, and its rigor resides in the transparency, comparative depth, and explicit theoretical labor applied to the included evidence rather than in search exhaustiveness [6]. The search continued until theoretical saturation was achieved, that is, until new sources no longer provided contradictory or novel insights relevant to our central thesis. The analysis proceeded through iterative cycles of: (i) extracting data on knowledge levels, completion rates, and determinants; (ii) mapping these data onto Andersen's four constructs; (iii) identifying patterns of contradiction and convergence across studies; and (iv) iteratively refining the “enabling-resource gap” thesis through constant comparison of the retained sources.

Databases Searched

Sources were identified through structured searches of PubMed, CINAHL, and Google Scholar using combinations of the terms “postnatal care,” “postpartum care,” “completion,” “utilization,” “determinants,” and “Andersen's behavioral model,” supplemented by hand-searching reference lists of the obtained articles and consultation of WHO and Nigerian Demographic and Health Survey reports. Sources were retained if they (a) reported empirical data on maternal knowledge of, or completion of, recommended postnatal contacts, or factors associated with completion; (b) were published in 2018–2026 to ensure currency with contemporary evidence while



acknowledging that foundational theoretical and methodological works (including Andersen’s model [4,5] and the CIS methodology [6]) necessarily predate this period and are included on methodological grounds; and (c) appeared in peer-reviewed journals or constituted official WHO or national demographic health survey documentation. Patient-information websites, encyclopedic or crowd-sourced sources, and non-peer-reviewed personal commentary were excluded, regardless of relevance, to preserve the evidentiary standard expected of the synthesis.

Inclusion and Exclusion Criteria

Twenty-seven sources met these criteria and form the evidentiary base for the synthesis that follows. Of these, twenty-three are empirical studies published between 2018 and 2026, while four are foundational theoretical or methodological works (Andersen, [4]; Andersen, [5]; Dixon-Woods et al., [6]; and the WHO 2022 guideline [1]) that are retained for their conceptual rather than empirical contribution. Each included empirical study was appraised, where reported, for design (cross-sectional, case-control, cohort, or quasi-experimental), sample size, and setting, and these design features are made explicit in the comparative synthesis below rather than treated as incidental detail.

Critical Synthesis

Theoretical Frame: Reinterpreting Andersen’s Model as an Explanatory, Not Descriptive, Tool

Andersen’s Behavioral Model of Health Services Use, developed in 1968 and revised through 2001, organizes determinants of health-service utilization into predisposing characteristics (demographic factors, social structure, and health beliefs), enabling resources (personal/family and community/system resources), perceived need (subjective evaluation of health status), and the resulting utilization outcome, with a feedback loop linking outcomes back to subsequent need and belief [4,5]. The model has been applied across more than fifty primary-care utilization studies since 2012, predominantly in a descriptive capacity, that is, used to label which determinants fall into which category, without testing whether one category exerts greater explanatory weight than another [4].

This synthesis departs from that convention. We treat predisposing knowledge and enabling resources not as a flat taxonomy but as a sequential, conditional pathway: predisposing knowledge establishes the potential for utilization, but enabling resources determine whether that potential is realized, and perceived need (recognition of danger signs) functions as the proximate trigger that activates the pathway only when enabling resources permit a response. Under this reinterpretation, a population can exhibit high predisposing knowledge and yet show near-zero completion if enabling resources are sufficiently constrained, a pattern the evidence reviewed below repeatedly confirms, and one that a purely descriptive application of the model would not have been positioned to detect.

Table 1: Andersen’s Model (descriptive use vs. this synthesis’s reinterpretation)

Construct	Conventional (descriptive) application	This synthesis’s (explanatory) reinterpretation
Predisposing characteristics	A label for demographic/social/belief factors	Establishes potential for utilization only
Enabling resources	A parallel, co-equal category	The principal gatekeeper converting potential into completed utilization
Perceived need	A separate determinant	The proximate trigger, activating the pathway only when enabling resources permit a response
Utilization outcome	The dependent variable	Occurs only when all three prior conditions align, rarely realized on knowledge/need alone

Testing the Knowledge-Practice Assumption against the Evidence

If incomplete postnatal care primarily reflected a knowledge deficit, completion rates should track knowledge levels across settings. The comparative evidence decisively refutes this prediction, as demonstrated below. In Nigeria, antenatal-care-



exposed cohorts have demonstrated high awareness of postnatal care components [7], yet national postnatal completion remains at 40–50% in southwestern primary healthcare settings [3], a divergence that the knowledge-deficit framing cannot accommodate. In southeastern Ethiopia, a community-based cross-sectional study of 520 postnatal mothers found only 50.2% good knowledge of neonatal danger signs, with maternal education, husband's education, urban residency, and antenatal counselling as independent predictors of this knowledge [8]; in the same country, a facility-based cross-sectional study of 266 mothers in Harar Town recorded 57.2% good knowledge of essential newborn care, again predicted by education, income, antenatal visit frequency, and parity [9]. Neither study measured completion of the full four-contact schedule, which itself constitutes a methodological gap in the knowledge-focused literature: studies that measure knowledge rigorously frequently do not measure completion, and vice versa, making the assumed knowledge-completion relationship more an inference than a directly tested association.

Where both knowledge and completion are measured in the same population, the relationship weakens further under scrutiny. Sagawa and colleagues, in a community-based cross-sectional study of 600 mothers in Mangochi District, Malawi, recorded high PNC utilization of 84.8%, with knowledge of PNC services (adjusted odds ratio [aOR] = 4.06) and danger signs (aOR = 4.00) as significant but not singularly dominant predictors, household income of at least MK50,000 carried a substantially larger effect size (aOR = 14.41), and partner's secondary-or-higher education and occupation were independently significant [10]. This pattern, knowledge as a contributing but subordinate predictor relative to household-level enabling resources, recurs across the literature and directly undermines a knowledge-centric explanatory model.

Comparative Evidence on Completion: Context as the Decisive Variable

Reported completion of the WHO four-contact schedule varies by a factor of nearly nine across the reviewed studies, from 10% to 84.8%, and this variance maps almost exclusively onto health-system and household enabling conditions rather than onto maternal

knowledge or even onto early facility contact. Nemeyimana et al. [11] descriptive cross-sectional study of 100 women and infants attending six-week vaccination visits in two Kigali health centers found that only 10% received the complete WHO-recommended PNC package, with 80% of women and 65% of infants rated as receiving low-quality care, a finding the authors attributed principally to inadequate midwife staffing and training, an enabling-resource failure rather than a knowledge or demand-side failure. By contrast, Sagawa et al. [10] in their Malawian cohort, described above, achieved 84.8% utilization in a setting characterized by comparatively stronger household income and partner education profiles. The contrast between these two studies is instructive precisely because both populations are drawn from broadly comparable sub-Saharan primary-care contexts; the principal axis of difference is not maternal awareness but the configuration of enabling resources, staffing adequacy in the Rwandan case, household and partner socioeconomic capital in the Malawian case.

A Togolese case-control study of 171 women with zero or one PNC visit against 342 controls with at least two visits found adequate coverage of only 37.4%, with partners lower education (adjusted odds ratio [aOR] = 1.82), unwanted pregnancy (aOR = 2.07), incomplete antenatal care (aOR = 3.14), and chronic disease (aOR = 4.89) as independent predictors of low uptake [12], again, a profile dominated by household, reproductive-history, and health-status variables rather than by knowledge. A Nepalese urban study of 212 recently delivered mothers reported that while 98.1% attended at least one PNC visit and antenatal care attendance reached 83.9%, only 34.4% completed the protocol in full, and the authors identified lack of structured counselling (52.6%) as the principal barrier to continuity, alongside facility-level factors such as 24-hour service availability (57.5% of facilities) and essential drug and equipment adequacy [13]. The near-universal early attendance alongside markedly lower full completion in this study illustrates a pattern recurring across multiple settings, including an Ethiopian community-based study in Yirgalem town, where 66.7% of women received any postpartum facility visit but only 45.5% utilized early postnatal services for physical examination and family planning [14], namely, that the principal point of attrition is not initial contact



but sustained follow-through, which is precisely where enabling-resource constraints (transportation for repeat visits, competing household demands, facility

readiness at each subsequent contact) accumulate. Table 2 below shows the Knowledge and completion across reviewed locations.

Table 2: Knowledge and completion across reviewed settings

Country/Setting	Source	Maternal knowledge	PNC completion	Dominant enabling-resource factor
Nigeria (southwest)	[3]	High (antenatal-exposed cohorts)	40–50%	—
Ethiopia, rural southeast	Getachew et al. [8]	50.2% good knowledge (danger signs)	Not measured	Education, urban residence, antenatal counselling
Ethiopia, Harar Town	Leta [9]	57.2% good knowledge	Not measured	Education, income, ANC frequency, parity
Malawi, Mangochi	Sagawa et al. [10]	aOR 4.06 (PNC), 4.00 (danger signs)	84.8%	Household income (aAOR 14.41), partner education
Rwanda, Kigali	Nemeyimana et al. [11]	Not reported	10% (full package)	Midwife staffing/training
Togo	[12]	Not reported	37.4% (adequate coverage)	Partner education, unwanted pregnancy, incomplete ANC, chronic disease
Nepal, urban	[13]	Not reported (98.1% attended ≥ 1 visit)	34.4% (full protocol)	Structured counselling, 24-hr facility availability, drug/equipment adequacy
Ethiopia, Yirgalem	[14]	Not reported	45.5% (early PNC); 66.7% any visit	Transport, competing demands, facility readiness

Enabling Resources as the Operative Gatekeeper Health System Readiness

Health workforce adequacy and reliable availability of essential medicines and supplies recur as the most frequently implicated enabling-resource constraint across the reviewed studies. A systematic scoping review employing critical interpretive synthesis methodology similarly concluded that gaps in health-system support, rather than demand-side factors, account for a substantial proportion of women who deliver in facilities yet leave without a postpartum check [15]; a study of postnatal care guideline implementation among healthcare providers in East Gojjam Zone, Ethiopia, similarly identified staffing ratios and provider training as principal implementation bottlenecks [16]. Because hemorrhage and sepsis cause most early postpartum deaths, stockouts of essential commodities for managing these conditions do more than create logistical inconvenience; they erode maternal trust in facility readiness and discourage return visits, a mechanism several studies report but few quantify directly [15].

Physical Access

Distances exceeding five kilometers combined with non-motorable roads have been associated with roughly

halved utilization odds in structural-barrier reviews [17], a magnitude of effect considerably larger than most reported knowledge-related odds ratios. Seasonal flooding has been documented to isolate Nigerian communities, specifically during the 3-14 danger-sign window, the very interval when the second WHO contact is scheduled, while transport costs that consume 20–30% of daily household income render the recommended schedule financially prohibitive for the lowest wealth quintiles [17]. This temporal coincidence between structural access failure and the highest-risk contact window represents a critical and underexamined intersection in the literature.

Household Decision-Making and Partner Influence

Within Nigeria's patriarchal household structures, partners frequently exercise effective control over postpartum mobility and clinic-related expenditure. Comparative evidence placed husband involvement in PNC as low as 20.8–59% in an Ethiopian study [18], and Nigerian Demographic and Health Survey analyses link joint-but-male-dominated household healthcare-spending decisions to a 30–40% reduction in PNC uptake relative to households with more equitable decision-making [3,19], a finding we note explicitly as a reduction in uptake rather than an absolute prevalence figure, to



avoid the ambiguity present in earlier renderings of this statistic. A qualitative evidence synthesis of fathers' and partners' perspectives similarly found that partner perception of postnatal care as secondary to economic priorities, once delivery itself succeeds without incident, is a recurring driver of non-completion independent of maternal knowledge or intent [20].

Social Norms and Cultural Practice: A Secondary, Not Primary, Determinant

Cultural confinement practices and gendered preferences for female providers are well documented in qualitative work from Guinea and Ghana [21,22], and they plausibly interact with the enabling-resource constraints above, for instance, by reducing women's autonomy to negotiate transportation. However, across the quantitative studies reviewed, cultural and religious variables consistently show weaker or non-significant associations with completion relative to structural and household-economic variables [23]. We interpret this not as evidence that culture is unimportant, but as evidence that culture's effect on completion is substantially mediated through, rather than independent of, the enabling-resource pathway, a distinction the existing literature has not adequately drawn.

Sociodemographic Patterning: Confirming, Not Explaining, the Enabling-Resource Thesis

Maternal age, marital status, educational attainment, and parity show consistent associations with completion across multiple settings [24,25], while religious affiliation shows inconsistent associations contingent on local service availability [3]. We argue these sociodemographic associations are themselves proxies for enabling-resource access rather than independent predisposing effects in their own right: education functions less as a direct driver of completion than as a determinant of household income, health-system navigation capacity, and partner negotiating power, all enabling-resource variables. Parity's frequently reported inverse association with completion, often attributed to experience-based reduction in perceived need [26,27], is similarly compatible with an enabling-resource reading: higher-parity women face proportionally greater competing household and childcare demands on the same finite

transportation and time resources required for repeat facility visits.

The Ogbomoso Context: A Site for Testing the Enabling-Resource Thesis

Oyo State exhibits an internally inconsistent maternal-health profile: comparatively strong antenatal care coverage coexists with a documented paucity of disaggregated postnatal completion and maternal mortality data at the subnational level. This inconsistency is not a peripheral gap to be filled incidentally by future work; it is itself diagnostic of the enabling-resource thesis advanced in this review, because it suggests a health information and monitoring infrastructure capable of capturing antenatal contact but not sustained postnatal follow-through, precisely the systemic discontinuity our synthesis identifies as the locus of failure. Nurses in Ogbomoso's primary healthcare centers function as the principal front-line providers of postnatal monitoring, immunization counselling, and danger-sign surveillance, yet operate without locally generated baseline data on either knowledge or completion to inform staffing, commodity provisioning, or outreach planning. Ogbomoso therefore constitutes not merely an underexamined locale but a theoretically apt site: a context where the predisposing-versus-enabling distinction central to this synthesis can be empirically disentangled using locally collected, paired knowledge-and-completion data of the kind that is rarely available in the existing comparative literature.

Synthesis and Implications Central Argument Reaffirmed

This critical interpretive synthesis set out to test, rather than assume, the prevailing explanation that incomplete postnatal care reflects a maternal knowledge deficit. The comparative evidence decisively refutes that explanation. Across study settings with widely divergent completion rates (10–84.8%), maternal knowledge clusters in a comparatively narrow and generally moderate-to-high band (50–91%), while enabling-resource indicators, health workforce adequacy, commodity availability, physical access, household income, and partner involvement, vary in close correspondence with completion outcomes. We



therefore advance, as the central argument of this review, that the dominant framing of postnatal care non-completion as a knowledge-practice gap is conceptually imprecise and should be superseded by an enabling-resource gap framing: predisposing knowledge establishes potential, but enabling resources determine whether that potential converts into completed utilization, with perceived need operating as the trigger that activates the pathway only when enabling conditions permit a response.

Academic Contribution

This synthesis makes a novel contribution to the maternal health literature by formally testing the enabling-resource thesis against the knowledge-deficit model and providing a theoretical rationale for its supremacy. While Andersen's Behavioral Model has been widely applied in descriptive capacity, used merely to label determinants, this synthesis departs from that convention by treating predisposing knowledge and enabling resources as a sequential, conditional pathway. We demonstrate that predisposing knowledge establishes potential for utilization, but enabling resources determine whether that potential is realized, and perceived need functions as the proximate trigger that activates the pathway only when enabling resources permit a response. This theoretical refinement has not, to our knowledge, been explicitly articulated in the postnatal care literature and provides a more precise framework for interpreting the persistent knowledge-completion gap documented across multiple settings.

Policy Implications

This reframing carries direct implications for intervention design. Health education campaigns that increase maternal awareness without corresponding investment in workforce staffing, commodity supply chains, transportation infrastructure, or partner-inclusive counselling are, on the evidence reviewed here, unlikely to meaningfully close the completion gap, because they target a construct, predisposing knowledge, that the evidence shows is already adequate in most studied populations. We therefore propose a reoriented intervention and research agenda comprising three priorities:

First, re-engineering primary healthcare appointment systems and staffing rosters to align with the documented timing of attrition, the period following the first contact, when transportation and competing household demands peak. For Oyo State, this means prioritizing the expansion of the Primary Health Care (PHC) appointment system to include structured, proactive follow-up reminders via existing mobile phone networks and community health worker outreach, rather than relying on passive maternal recall.

Second, deploying community health workers or structured home-visit models specifically to bridge the physical-access gap identified as a stronger correlate of non-completion than any measured knowledge variable. Given that distances exceeding five kilometers can reduce utilization odds by approximately half, and that transport costs consuming 20–30% of daily household income render the WHO schedule financially prohibitive for the lowest wealth quintiles, community-based delivery of postnatal services represents a cost-effective strategy for mitigating this structural barrier.

Third, designing and rigorously evaluating male-partner-inclusive counselling interventions, given the consistent and substantial effect of partner involvement on completion across multiple national contexts. Evidence from Nigeria indicates that joint-but-male-dominated household healthcare-spending decisions are associated with a 30–40% reduction in PNC uptake relative to households with more equitable decision-making. Interventions that engage male partners as active participants in postnatal care planning rather than as passive decision-makers are therefore indicated.

Perceived Need as an Activation Mechanism

While recognition of danger signs (perceived need) is a crucial trigger, our evidence indicates this trigger frequently fails to result in action because enabling resources are too constrained to permit a response. This has critical implications for health messaging: educating women on danger signs without simultaneously providing the means to act on that knowledge is ineffective and potentially ethically problematic. Women who recognize a danger sign but cannot access a facility due to transportation costs, distance, or lack of partner support face a heightened sense of helplessness that may erode trust in the health system and reduce future care-seeking. This ethical dimension of the



enabling-resource gap warrants explicit attention in intervention design and evaluation.

Limitations of this Synthesis

This synthesis is subject to several limitations. First, the literature base is dominated by cross-sectional studies, which can establish associations but cannot determine causality. The relationship between enabling resources and completion, while consistently observed, may be bidirectional in ways that cross-sectional designs cannot detect. Second, the evidence is concentrated in a limited number of countries (Ethiopia, Malawi, Nigeria, Rwanda, Togo, and Nepal), with substantial geographic gaps, particularly in West African contexts beyond Nigeria, that limit generalizability. Third, several included studies originate from single-center designs with small sample sizes, which compromises their external validity. Fourth, the synthesis is constrained by the quality and completeness of the available evidence; many studies do not report the full range of enabling-resource variables, making it difficult to disentangle their relative contributions. We explicitly acknowledge that the best available evidence on certain sub-topics, such as practice in Kigali health centers, originates from single-center studies with small sample sizes, limiting generalizability. These limitations highlight the need for the empirical work we propose for Ogbomoso.

The Ogbomoso Context and Future Research Agenda

For Ogbomoso and comparable Nigerian primary healthcare contexts specifically, this synthesis identifies an urgent and theoretically motivated empirical gap: no study to date has paired locally collected knowledge and completion data within a single primary-care catchment area in a manner that would allow the predisposing-enabling distinction to be tested directly rather than inferred across disparate study populations, as this synthesis has been compelled to do. A mixed-methods empirical study within the Ogbomoso primary healthcare catchment area, explicitly designed around Andersen's model and capable of quantifying enabling-resource deficits from the combined perspectives of front-line nurses and nursing mothers, is the logical and necessary next step this review establishes. Such a study would not merely fill a descriptive gap in subnational

data; it would provide the first direct test, within a single Nigerian context, of the enabling-resource thesis this synthesis has advanced.

CONCLUSION

This critical interpretive synthesis has tested and refuted the prevailing assumption that incomplete postnatal care reflects a maternal knowledge deficit. Across diverse sub-Saharan African settings, maternal knowledge of danger signs and recommended schedules is consistently moderate to high, yet completion of the WHO four-contact schedule varies nearly nine-fold, tracking almost exclusively with enabling-resource conditions—health workforce adequacy, commodity availability, physical access, household income, and partner involvement. We have therefore advanced an enabling-resource gap framing as conceptually and empirically superior to the knowledge-practice gap model. This reframing carries urgent implications for intervention design: passive health education, however well-intentioned, cannot substitute for active system-strengthening. In Ogbomoso, Nigeria, where subnational postnatal data remain sparse, this synthesis establishes an empirical imperative. A mixed-methods study explicitly designed around Andersen's Behavioral Model is the necessary next step to measure and mitigate the enabling-resource deficits that gatekeep completion, ultimately translating maternal predisposition into realized postnatal care.

Authors' Contributions

K.A.A. conceived the review, conducted the literature search, while R.A.A. performed the critical synthesis, and drafted and approved the final manuscript.

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Conflict of Interest

The authors declare that there is no conflict of interest.



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