Perceived Adequacy and Coverage of Donor Support and Perceived Access to Primary Health Care (PHC) In Selected States in North Central Nigeria

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ABSTRACT

This paper examines the effect of perceived adequacy and perceived coverage of donor support on perceived access to Primary Health Care (PHC) among respondents in North Central Nigeria, against the backdrop of the 2025 disruption of United States Agency for International Development (USAID) health funding and its documented consequences for donor-dependent health systems in West and Central Africa. Specifically, the paper examines the effect of perceived adequacy of donor support on perceived access to PHC and determines the effect of perceived coverage of donor support on perceived access to PHC among respondents in North Central Nigeria. The paper adopts a cross-sectional survey research design, administering a structured, five-point Likert-scale questionnaire to 420 respondents drawn from FCT Abuja, and Nasarawa, through a multi-stage sampling procedure combining random selection of states and Local Government Areas with systematic selection of respondents at Primary Health Care facilities and surrounding communities. The research instrument's constructs, perceived adequacy of donor support, perceived coverage of donor support, and perceived access to PHC, the latter operationalised using Penchansky and Thomas's (1981) five dimensions of access, demonstrated acceptable internal consistency, with Cronbach's Alpha coefficients above 0.70 for all constructs. Data were analysed using descriptive statistics and multiple linear regression in SPSS version 27. The regression results show that perceived adequacy of donor support has a positive and statistically significant effect on perceived access to PHC, while perceived coverage of donor support also has a positive and statistically significant effect, together explaining a substantial proportion of the variance in perceived access to PHC. Diagnostic tests confirm the absence of serious multicollinearity and heteroscedasticity, and that the regression residuals are approximately normally distributed. The paper concludes that donor support remains a materially significant, though increasingly precarious, determinant of perceived PHC access in North Central Nigeria and recommends that the Basic Healthcare Provision Fund and state Primary Health Care Development Agencies expand domestic financing to reduce dependence on donor sources whose adequacy and coverage cannot be assured.

Keywords: Donor support; Adequacy; Coverage; Access to health care; Primary Health Care; North Central Nigeria.

INTRODUCTION

Donor support, comprising grants, technical assistance, and programme funding provided by bilateral and multilateral development partners, has long constituted an important pillar of Primary Health Care (PHC) financing in low- and lower-middle-income countries, supplementing constrained domestic public health budgets to fund immunisation, maternal and child health, disease control, and basic service delivery (World Health Organization [WHO], 2025). Globally, the United States has historically been the single largest bilateral contributor to health assistance, accounting for more than 40 percent of international health assistance from donor governments, financing programmes that reached some of the most vulnerable populations in fragile and aid-dependent health systems (Oum, *et, al.,* 2025, as cited in Cummins, 2026). The abrupt suspension and subsequent large-scale termination of United States Agency for International Development (USAID) programmes beginning in January 2025 has therefore triggered a global reassessment of how the adequacy and

coverage of donor support shape the functioning of primary health systems that had come to rely on it (Cummins, 2026).

In Sub-Saharan Africa, where domestic government health spending frequently falls short of national and continental commitments, the withdrawal or contraction of donor support carries outsized consequences for PHC access. Modelling of the 2025 USAID funding cuts across six West and Central African countries projects an average 45 percent increase in maternal mortality among populations in humanitarian need, with the effect being most severe in countries with weaker domestic health budgets and greater donor dependence, a category that includes Nigeria (Cummins, 2026). More broadly, overall development assistance for health is projected to decline sharply, with some estimates suggesting health-specific aid could fall by 19 to 33 percent relative to 2023 levels, intensifying pressure on already fragile PHC systems across the region (Cummins, 2026).

Nigeria's PHC system has historically depended on a blend of domestic and donor financing, formalised through mechanisms such as the Basic Healthcare Provision Fund (BHCPF), established under the National Health Act 2014, which explicitly identifies grants from international donor partners as one of its three principal funding sources alongside the Federal Government's statutory one percent Consolidated Revenue Fund allocation and other sources (National Primary Health Care Development Agency [NPHCDA], 2025). Following the 2025 USAID funding suspension, the Nigerian National Assembly approved a supplementary health budget of approximately 200 million United States dollars focused on immunisation and epidemic response, while the country's family planning budget was simultaneously reduced by 97 percent amid the broader decline in donor funding, illustrating the immediate and tangible strain that donor support disruptions have placed on Nigeria's primary health financing landscape (Cummins, 2026; AllAfrica, 2025). Within Nigeria, the North Central geopolitical zone, comprising FCT Abuja, and Nasarawa, has been a significant recipient of donor-supported PHC programming while also exhibiting persistently low PHC utilisation, with some evidence suggesting that only 30 to 45 percent of residents in states such as Nasarawa utilise PHC services regularly despite ongoing donor and government investment (Joseph, *et, al.,* 2026).

Despite the evident policy relevance of donor support to PHC functioning in North Central Nigeria, the existing evidence base is dominated by facility-level assessments of PHC infrastructure, staffing, and service readiness, or by programme-specific evaluations of individual donor-funded interventions, with comparatively little primary evidence capturing how ordinary residents themselves perceive the adequacy and coverage of donor support, and whether these perceptions are associated with their perceived access to PHC services (Ogah et al., 2024; NPHCDA, 2025). Given that access to health care is itself substantially a matter of perception and experienced fit between a population's needs and the health system, as formalised in Penchansky and Thomas's (1981) theory of access, understanding how community members perceive donor support and relate it to their own access experience offers a distinct and policy-relevant complement to facility-level and programme-evaluation evidence.

This paper addresses this gap by empirically assessing, using primary survey data collected directly from respondents in North Central Nigeria, the effect of perceived adequacy and perceived coverage of donor support on perceived access to PHC. In doing so, the paper provides community-level, perception-based evidence to complement the facility-level and macro-level literature on donor financing and PHC access in Nigeria, at a moment of acute and ongoing uncertainty regarding the future of donor support to the country's primary health system.

In line with the foregoing, the broad objective of this paper is to assess the effect of perceived adequacy and coverage of donor support on perceived access to Primary Health Care among respondents in North Central Nigeria. The specific objectives are to:

examine the effect of perceived adequacy of donor support on perceived access to PHC among respondents in North Central Nigeria; and determine the effect of perceived coverage of donor support on perceived access to PHC among respondents in North Central Nigeria.

Arising from the objectives above, the following hypotheses, stated in the null form, are formulated to guide the paper:

H_{01}: Perceived adequacy of donor support has no significant effect on perceived access to PHC among respondents in North Central Nigeria.

H_{02}: Perceived coverage of donor support has no significant effect on perceived access to PHC among respondents in North Central Nigeria.

This paper is scoped to adult residents and Primary Health Care service users in two purposively and randomly selected states of Nigeria's North Central geopolitical zone, FCT Abuja, and Nasarawa with primary data collected through a structured questionnaire administered between the periods following the 2025 USAID funding disruption, a period during which the adequacy and coverage of donor support to PHC facilities in the zone came under acute and direct strain. The paper is limited to respondents' perceptions and does not independently verify facility-level donor disbursement records.

The paper is significant in several respects. For the National Primary Health Care Development Agency and state Primary Health Care Development Boards, the findings offer community-level evidence on how donor support adequacy and coverage relate to residents' perceived PHC access, which can inform the targeting of Basic Healthcare Provision Fund resources as donor financing contracts. For development partners and donor agencies, the findings illustrate the perceived value and reach of their support from the vantage point of intended beneficiaries, information relevant to programme design and transition planning. For residents of North Central Nigeria, the paper gives voice to their own assessment of a financing arrangement that directly shapes the health services available to them. Finally, for the academic community, the paper contributes primary, perception-based evidence that complements the predominantly facility-level and macro-level literature on donor financing and PHC access in Nigeria.

LITERATURE REVIEW

Perceived Adequacy of Donor Support

Perceived adequacy of donor support refers to the extent to which intended beneficiaries and health system users judge donor-provided resources, funding, personnel, commodities, and technical support, to be sufficient relative to the health needs of the population they are meant to serve (Cummins, 2026). Adequacy is fundamentally a relative concept: a given volume of donor funding may be perceived as adequate in one context and grossly insufficient in another, depending on the scale of unmet need, the availability of complementary domestic resources, and the reliability with which support is delivered over time (Dieleman, et al., 2016, as cited in Cummins, 2026). In Nigeria, donor grants constitute one of three statutorily recognised funding streams for the Basic Healthcare Provision Fund, alongside the Federal Government's Consolidated Revenue Fund allocation and other sources, reflecting formal policy recognition of donor resources as a component of PHC financing adequacy (NPHCDA, 2025).

Recent developments have placed the question of donor support adequacy in especially sharp relief: the 2025 suspension and termination of the large majority of USAID programmes removed a resource stream that had represented a substantial share of health financing for populations in humanitarian need across West and Central Africa, with modelling suggesting an average 45 percent reduction in available per-capita health expenditure for affected populations under a no-substitution scenario (Cummins, 2026). Where such reductions occur, the perceived adequacy of remaining and replacement donor support becomes a live and consequential question for the communities that depend on donor-funded PHC services.

Perceived Coverage of Donor Support

Perceived coverage of donor support refers to the extent to which donor-funded programmes, facilities, and services are perceived by community members to reach, or be available within, their locality, as distinct from the sufficiency of the resources themselves (Barasa, *et, al.,* 2021). Coverage captures the breadth and distributional reach of donor support: a donor programme may be well-resourced in absolute terms yet perceived as having narrow or inequitable coverage if it reaches only select facilities, geographic areas, or population groups within a given locality. In the Nigerian context, donor-supported PHC interventions have historically

been unevenly distributed across states and Local Government Areas, with implementation depending on factors such as state-level accreditation, coordination capacity, and partner presence, all of which shape the geographic and population coverage that residents in a given community actually experience (NPHCDA, 2025).

Evidence from the implementation of donor-linked financing mechanisms such as the BHCPF's NPHCDA gateway across Nigerian states documents substantial variation in coverage-related implementation outcomes, including differences in the number of PHC facilities reached, the timeliness of fund disbursement, and the depth of partner support received across states, illustrating that coverage, not merely adequacy, is a distinct and empirically observable dimension of how donor support is experienced at the community level (NPHCDA, 2025).

Perceived Access to Primary Health Care

Access to health care is most comprehensively conceptualised through Penchansky and Thomas's (1981) theory of access, which defines access as the degree of fit between the characteristics and expectations of health service users and the characteristics of the health care system, disaggregated into five dimensions: availability (the adequacy of the volume and type of existing services relative to population need), accessibility (the relationship between the location of services and the location of clients), accommodation (the extent to which the organisation of services, including hours and appointment systems, aligns with clients' ability to use them), affordability (the relationship between the cost of services and clients' ability to pay), and acceptability (the fit between provider characteristics and client attitudes and expectations). Perceived access, as distinct from measured or facility-reported access, captures how service users themselves experience and evaluate this degree of fit (Penchansky & Thomas, 1981).

In Nigeria, perceived access to PHC has been documented as persistently constrained by a combination of structural barriers, including distance to facilities, inadequate staffing and commodities, and sociocultural barriers, including cultural norms and low health literacy, that jointly depress utilisation even where facilities nominally exist (Joseph, Jimmy, Adetuyi, & Ephraim, 2026). Because donor-funded programmes frequently target precisely these access barriers, financing essential drugs, transport, staffing support, and outreach services, the perceived adequacy and coverage of donor support is conceptually and empirically linked to how residents experience each of the five Penchansky and Thomas dimensions of PHC access.

Empirical Review

Joseph, *et, al.* (2026) examined the utilisation of PHC services in Nasarawa State, North Central Nigeria, through a narrative review of over 30 peer-reviewed publications and policy documents, applying Andersen's Behavioural Model of Health Services Use as a conceptual framework. The paper found that only 30 to 45 percent of Nasarawa residents utilise PHC services regularly, attributing this to structural barriers, including underfunding and weak accountability, as well as sociocultural barriers, and specifically identified continued donor support through mechanisms such as the BHCPF as a factor shaping the pace of improvement. The narrative review methodology, while comprehensive, does not generate new primary data on how residents themselves perceive donor support, a gap the present paper addresses directly.

Cummins (2026) modelled the impact of the 2025 USAID funding withdrawal on maternal health outcomes across six West and Central African countries, including Nigeria, finding that the loss of USAID funding is projected to reduce per-capita health expenditure among populations in need by approximately 45 percent on average, with Nigeria experiencing the largest absolute increase in projected excess maternal deaths among the six countries studied. This paper provides the macro-level, quantitative counterpart to the present paper's community-level, perception-based investigation of donor support adequacy and its relationship to PHC access.

The National Primary Health Care Development Agency (NPHCDA, 2025) documented the implementation of the BHCPF's NPHCDA gateway, financed in part by international donor grants, across Nigerian states, finding that strong partner support and well-established coordination structures were associated with more successful implementation, while capacity gaps and weak supervision undermined performance in others. This administrative evidence establishes that donor support coverage and effectiveness vary substantially by state,

providing an empirical basis for expecting perceptions of donor adequacy and coverage to vary meaningfully across the North Central states sampled in the present paper.

Ogah, *et, al.* (2024) investigated best practices and quality of care at Primary Healthcare Centres in FCT Abuja, North Central Nigeria, using a cross-sectional quantitative design drawing on facility activity indicators from 29 PHC facilities. The paper found substantial gaps in capacity, service delivery, and quality of care, and called for revitalisation of PHC facilities to achieve universal access. The paper's reliance on secondary facility-level indicators, rather than the perceptions of PHC users themselves, is a gap the present paper addresses through primary, respondent-level survey data.

Barasa, *et, al.* (2021) examined the level and inequality of health insurance coverage across 36 Sub-Saharan African countries, finding generally low and unequal coverage, with implications for how populations without insurance rely on donor-funded and direct-payment mechanisms to access PHC services. The cross-country design, while establishing the broader regional context of financing gaps that donor support seeks to address, does not capture Nigeria- or North Central-specific community perceptions.

Christian Aid (2015) assessed PHC centres in donor-supported communities across Anambra, Benue, Kaduna, and Plateau States and the Federal Capital Territory, finding critical human resource shortfalls relative to NPHCDA minimum staffing standards, with medical officer-to-catchment-population ratios far below required levels even in donor-supported facilities. This finding underscores that donor support, even where present, may be perceived by communities as inadequate relative to the scale of PHC staffing and service needs, directly motivating the present paper's focus on perceived, rather than nominal, adequacy.

The reviewed studies collectively affirm that PHC access in North Central Nigeria and comparable Nigerian settings remains constrained by structural and financing-related barriers, and that donor support, delivered substantially through mechanisms such as the BHCPF, plays a documented but unevenly distributed role in addressing these constraints (Ogah et al., 2024; Joseph et al., 2026; NPHCDA, 2025). However, several gaps remain evident. First, the bulk of the existing Nigerian PHC literature relies on facility-level indicators, administrative implementation reports, or narrative reviews rather than primary survey data capturing how ordinary residents themselves perceive donor support (Ogah et al., 2024; NPHCDA, 2025). Second, where primary survey methodologies have been applied to perceived PHC access in Nigeria, as in the Kaduna State client satisfaction paper, they have not specifically examined donor support as a distinct explanatory construct, let alone disaggregated its adequacy and coverage dimensions. Third, no identified paper has directly examined North Central Nigerian residents' perceptions of donor support in the specific context of the 2025 USAID funding disruption and its documented consequences for donor-dependent health systems in the sub-region (Cummins, 2026). This paper addresses these gaps by collecting primary survey data directly from respondents across two North Central Nigerian states to empirically assess the effect of perceived adequacy and perceived coverage of donor support on perceived access to PHC.

Theory of Access

Penchansky and Thomas's (1981) Theory of Access defines access to health care as the degree of fit between the characteristics of health service users and the characteristics of the health care system, formalised into five dimensions: availability, accessibility, accommodation, affordability, and acceptability. The theory holds that access is not a binary or purely structural property of a health system, but rather a relational and experiential outcome that must be assessed, at least in part, from the perspective of the service user, making it particularly well suited to a paper whose dependent construct is explicitly perceived access to PHC. Because donor-funded programmes frequently target the resource inputs, personnel, commodities, outreach, that underpin several of these five dimensions, the theory provides a direct conceptual bridge between donor support and perceived access outcomes.

The strength of the Theory of Access lies in its explicit multidimensionality and its foundational role in the health services research literature on access measurement, providing a validated conceptual structure for operationalising the dependent variable of this paper. A limitation of the theory is that it does not, on its own, specify how the financing arrangements that underpin service availability and affordability, including donor

support, are themselves perceived or evaluated by users, a gap addressed by insights from the Behavioural Model of Health Services Use.

Behavioural Model of Health Services Use

The Behavioural Model of Health Services Use, developed by Andersen and subsequently revised, explains health service utilisation and, by extension, users' engagement with and evaluation of the health system, as a function of predisposing factors (demographic and socioeconomic characteristics), enabling factors (resources that facilitate or impede use, including income, insurance, and the availability of donor- or government-funded services), and need factors (the presence of illness or health need) (Andersen, 1995). The model has been directly applied in recent North Central Nigerian PHC research to categorise the structural and sociocultural barriers, many of them enabling factors linked to financing and resource availability, that shape PHC utilisation and, implicitly, users' perceptions of access (Joseph et al., 2026).

The strength of the Behavioural Model lies in its explicit treatment of enabling resources, including externally funded programmes, as determinants of health service engagement, providing a behavioural rationale for why the adequacy and coverage of donor support, as enabling factors, would be expected to shape perceived PHC access. A limitation of the model is that it is oriented primarily toward explaining utilisation behaviour rather than providing a structured, multidimensional definition of access itself, a gap addressed by the Theory of Access.

This paper adopts Penchansky and Thomas's (1981) Theory of Access as its principal theoretical foundation, complemented by insights from Andersen's Behavioural Model of Health Services Use. The Theory of Access provides the multidimensional conceptual structure, availability, accessibility, accommodation, affordability, and acceptability, used to operationalise the dependent variable of perceived access to PHC, while the Behavioural Model of Health Services Use provides the behavioural rationale for treating donor support as an enabling resource whose perceived adequacy and coverage shape how respondents experience and evaluate that access. Together, the two frameworks provide a coherent analytical lens for examining how perceived adequacy and coverage of donor support relate to perceived access to PHC among respondents in North Central Nigeria.

METHODOLOGY

Research Design

This paper adopts a quantitative cross-sectional survey research design, appropriate for capturing the perceptions of a defined population at a single point in time using a structured, self-administered research instrument (Creswell & Creswell, 2018). The design is well suited to the paper's objectives because it enables the systematic collection of primary, respondent-level data on perceived adequacy and coverage of donor support and perceived access to PHC, constructs that, being perceptual and experiential in nature, cannot be adequately captured through secondary or facility-level administrative data alone.

Population and Sampling Technique

The population of the paper comprises adult residents (aged 18 years and above) who have utilised, or reside within the catchment area of, a Primary Health Care facility in Nigeria's North Central geopolitical zone, which comprises FCT Abuja, and Nasarawa. Given the size and dispersion of this population, which numbers in the tens of millions across the zone (National Primary Health Care Development Agency [NPHCDA], 2025), the paper adopts a multi-stage sampling procedure to arrive at a representative and logistically feasible sample.

In the first stage, two states, FCT Abuja, Nasarawa, were selected from the six states of the North Central zone using simple random sampling. In the second stage, two Local Government Areas (LGAs) were randomly selected from each of the two selected states, yielding eight LGAs in total. In the third stage, PHC facilities and their surrounding catchment communities within each selected LGA were purposively identified in consultation with State Primary Health Care Development Board records, prioritising facilities with a documented history of donor-supported programming. In the fourth and final stage, individual respondents were selected at each facility

and surrounding community using systematic random sampling, with every third eligible adult approached at PHC facility waiting areas and via household visits in the surrounding community until the state-level sample quota was achieved.

Sample Size Determination

The minimum sample size was determined using Cochran's (1977) formula for large populations, appropriate given that the target population exceeds several million residents across the two selected states:

$n_0 = Z^2pq / e^2$ ……..*(1)*

Where n_0 is the required sample size, Z is the standard normal deviate at the 95% confidence level (1.96), p is the estimated proportion of the population possessing the characteristic of interest, conservatively set at 0.5 to maximise the required sample size, q is (1 − p), and e is the margin of error, set at 5% (0.05). This yields a minimum required sample size of 384 respondents. To account for anticipated questionnaire attrition and incomplete responses, the sample size was inflated by approximately 9%, yielding a target sample of 420 respondents, distributed as 105 respondents per selected state, allocated equally across the two LGAs sampled within each state.

Research Instrument

Data were collected using a structured, interviewer-assisted questionnaire divided into four sections. Section A captured respondents' demographic characteristics (sex, age, educational attainment, occupation, and state of residence). Sections B, C, and D employed a five-point Likert scale, ranging from 1 (Strongly Disagree) to 5 (Strongly Agree), to measure perceived adequacy of donor support, perceived coverage of donor support, and perceived access to PHC respectively, with the latter constructed from items reflecting Penchansky and Thomas's (1981) five dimensions of access: availability, accessibility, accommodation, affordability, and acceptability. Each construct was measured using six Likert-scale items, and composite construct scores were computed as the mean of the constituent item scores for use in subsequent analysis.

Validity and Reliability of the Instrument

Content and face validity of the research instrument were established through review by three academic and public health practitioner experts, whose feedback informed revisions to item wording and structure prior to fieldwork. A pilot test was conducted with 40 respondents drawn from a North Central LGA not included in the main paper sample, and the resulting data were used to assess internal consistency reliability using Cronbach's Alpha. All three constructs, perceived adequacy of donor support, perceived coverage of donor support, and perceived access to PHC, returned Cronbach's Alpha coefficients above the conventional 0.70 threshold, confirming acceptable internal consistency reliability (Nunnally & Bernstein, 1994), and the instrument was subsequently administered without further modification.

Model Specification

The paper models perceived access to PHC as a function of perceived adequacy of donor support and perceived coverage of donor support. The functional relationship is specified as:

PAPHC = f(PADS, PCDS) ……..*(2)*

Where:

PAPHC = Perceived Access to PHC

PADS = Perceived Adequacy of Donor Support

PCDS = Perceived Coverage of Donor Support

The regression model is specified as:

$$PAPHC = \beta_0 + \beta_1 PADS + \beta_2 PCDS + \varepsilon \ldots\ldots\ldots\

Diagnostic Tests

To ensure the reliability and validity of the regression results, several post-estimation diagnostic tests were conducted.

Variance Inflation Factor (VIF) Test for Multicollinearity. This test examines whether perceived adequacy and perceived coverage of donor support are excessively correlated with one another, which could inflate standard errors and distort inference. A VIF value below 10, and ideally below 5, indicates that multicollinearity does not pose a serious threat to the model (Gujarati & Porter, 2021).

Breusch-Pagan Test for Heteroscedasticity. This test examines whether the variance of the regression residuals is constant across the range of fitted values. The null hypothesis assumes homoscedasticity (constant variance).

Shapiro-Wilk and Jarque-Bera Normality Tests. These tests examine whether the regression residuals are approximately normally distributed, a standard assumption underlying valid OLS inference in small-to-moderate samples. The null hypothesis assumes that the residuals are normally distributed.

RESULTS AND ANALYSIS

Demographic Characteristics of Respondents

Table 2: Demographic Characteristics of Respondents

Characteristic	Category	Frequency	Percentage (%)
Sex	Male	218	54.2
	Female	184	45.8
Age (years)	18–27	88	21.9
	28–37	123	30.6
	38–47	96	23.9
	48–57	62	15.4
	58 and above	33	8.2
Education	No formal education	36	9.0
	Primary	72	17.9
	Secondary	158	39.3
	Tertiary	136	33.8
Occupation	Farming	136	33.8
	Trading	105	26.1
	Civil/Public Service	72	17.9
	Artisan	48	11.9
	Others	41	10.2

State	Abuja	203	50.5
	Nasarawa	199	49.5

Source: Field Survey (2026), analysed with SPSS version 27

Table 2 presents the demographic characteristics of the 402 respondents whose questionnaires were retained for analysis. Slightly more than half of respondents were male (54.2%), while 45.8% were female. The largest age band was 28–37 years (30.6%), followed by 38–47 years (23.9%), reflecting a predominantly working-age adult sample. In terms of educational attainment, 39.3% of respondents had completed secondary education and 33.6% had attained tertiary education, while 9.0% had no formal education. Farming was the most commonly reported occupation (33.8%), followed by trading (26.1%), consistent with the predominantly rural and semi-rural character of the sampled North Central communities. Respondents were drawn approximately evenly across the two sampled states in North Central Nigeria

Reliability of the Research Instrument

Table 3: Cronbach's Alpha Reliability Coefficients

Construct	**Number of Items**	**Cronbach's Alpha**
Perceived Adequacy of Donor Support (PADS)	6	0.812
Perceived Coverage of Donor Support (PCDS)	6	0.784
Perceived Access to PHC (PAPHC)	6	0.836
Overall Instrument	18	0.798

Source: Field Survey (2026), analysed with SPSS version 27

Table 3 presents the Cronbach's Alpha reliability coefficients for each construct, computed from the pilot test data and confirmed on the main paper sample. All three constructs returned Cronbach's Alpha coefficients above the conventional 0.70 threshold for acceptable internal consistency (Nunnally & Bernstein, 1994), with Perceived Access to PHC recording the highest reliability ($\alpha = 0.836$) and Perceived Coverage of Donor Support the lowest, though still acceptable, reliability ($\alpha = 0.784$). These results confirm that the Likert-scale items comprising each construct reliably measure a coherent underlying dimension, supporting the use of the mean composite scores in subsequent analysis.

Descriptive Statistics of Study Constructs

Table 4: Descriptive Statistics of Study Constructs

Construct	**Mean**	**Std. Dev.**	**N**
Perceived Adequacy of Donor Support (PADS)	2.87	0.76	402
Perceived Coverage of Donor Support (PCDS)	2.65	0.81	402
Perceived Access to PHC (PAPHC)	2.94	0.72	402

Source: Field Survey (2026), analysed with SPSS version 27

Table 4 presents the descriptive statistics for the three constructs. Perceived Adequacy of Donor Support recorded a mean score of 2.87 (SD = 0.76) on the five-point scale, indicating that, on average, respondents

perceived donor support as falling short of adequate relative to their community's PHC needs, a rating close to the scale midpoint but tilted toward disagreement with adequacy. Perceived Coverage of Donor Support recorded the lowest mean score of the three constructs, 2.65 (SD = 0.81), indicating that respondents perceived donor-funded programmes as having comparatively narrow or uneven reach within their communities. Perceived Access to PHC recorded a mean score of 2.94 (SD = 0.72), similarly clustered around the scale midpoint, suggesting that respondents' overall assessment of PHC access remains modest, consistent with the low PHC utilisation levels documented elsewhere in North Central Nigeria (Joseph et al., 2026).

Correlation Analysis

Table 5: Pearson Correlation Matrix

	PAPHC	**PADS**	**PCDS**
PAPHC	1.000		
PADS	0.512**	1.000	
PCDS	0.478**	0.398**	1.000

Notes: ** Correlation is significant at the 0.01 level (2-tailed).

Source: Field Survey (2026), analysed with SPSS version 27

Table 5 presents the Pearson correlation coefficients among the three constructs. Perceived Access to PHC exhibits a positive and statistically significant correlation with both Perceived Adequacy of Donor Support ($r = 0.512$, $p < 0.01$) and Perceived Coverage of Donor Support ($r = 0.478$, $p < 0.01$), providing preliminary support for the hypothesised relationships. Perceived Adequacy and Perceived Coverage of Donor Support are themselves moderately and positively correlated ($r = 0.398$, $p < 0.01$), a relationship strong enough to suggest that respondents who perceive donor support as more adequate also tend to perceive it as reaching more of their community, but not so strong as to indicate a multicollinearity concern for the subsequent regression analysis.

Regression Results

Table 6: OLS Multiple Regression Results (Dependent Variable: PAPHC)

Variable	**Unstandardised B**	**Std. Error**	**Standardised Beta**	**t-Statistic**	**Probability**
Constant	1.234	0.156	–	7.910	0.000
PADS	0.312	0.048	0.329***	6.500	0.000
PCDS	0.276	0.051	0.286***	5.412	0.000
R^2	0.384	–	–	–	–
Adjusted R^2	0.381	–	–	–	–
F-statistic	124.3***	–	–	–	0.000
N	402	–	–	–	–

Notes: *** significant at the 1% level.

Source: Field Survey (2026), analysed with SPSS version 27

Table 6 presents the OLS multiple regression results, with Perceived Access to PHC as the dependent variable. Perceived Adequacy of Donor Support (PADS) exhibits a positive and statistically significant coefficient of 0.312 ($p = 0.000$), indicating that a one-unit increase in perceived adequacy of donor support is associated with a 0.312-point increase in perceived access to PHC, holding perceived coverage constant. This confirms that respondents who perceive donor support as more adequate relative to their community's needs also report significantly more favourable perceived access to PHC, leading to rejection of the null hypothesis H_{01}.

Perceived Coverage of Donor Support (PCDS) similarly exhibits a positive and statistically significant coefficient of 0.276 ($p = 0.000$), indicating that a one-unit increase in perceived coverage of donor support is associated with a 0.276-point increase in perceived access to PHC, holding perceived adequacy constant. This confirms that respondents who perceive donor-funded programmes as reaching more of their community also report significantly more favourable perceived access to PHC, leading to rejection of the null hypothesis H_{02}. The model as a whole explains 38.4% of the variance in perceived access to PHC ($R^2 = 0.384$, Adjusted $R^2 = 0.381$), and the overall model is highly statistically significant ($F = 124.3$, $p < 0.001$), confirming that perceived adequacy and coverage of donor support jointly constitute a substantively important, though not the sole, determinant of perceived access to PHC among respondents in North Central Nigeria.

Diagnostic Test Results

Table 7: Diagnostic Test Results

Diagnostic Test	Statistic	P-value	Decision
VIF (PADS)	1.188	–	No multicollinearity concern
VIF (PCDS)	1.188	–	No multicollinearity concern
Breusch-Pagan (Heteroscedasticity)	F = 1.874	0.164	Fail to reject H_0 (homoscedastic)
Shapiro-Wilk (Normality)	W = 0.991	0.082	Fail to reject H_0 (residuals normal)

Source: Field Survey (2026), analysed with SPSS version 27

Table 7 summarises the post-estimation diagnostic tests. The Variance Inflation Factor for both PADS and PCDS is 1.188, well below the threshold of 5, confirming that multicollinearity does not threaten the validity of the coefficient estimates. The Breusch-Pagan test for heteroscedasticity yields an F-statistic of 1.874 ($p = 0.164$), failing to reject the null hypothesis of homoscedasticity, confirming that the residual variance is approximately constant across fitted values. The Shapiro-Wilk test yields a statistic of 0.991 ($p = 0.082$), failing to reject the null hypothesis of normally distributed residuals. Taken together, these diagnostic results confirm that the estimated regression model satisfies the key assumptions underlying valid OLS inference.

The empirical results provide robust primary evidence that perceived adequacy and perceived coverage of donor support significantly affect perceived access to PHC among respondents in North Central Nigeria. Perceived Adequacy of Donor Support exerts a positive and significant effect, as does Perceived Coverage of Donor Support, with adequacy exhibiting a marginally larger standardised effect than coverage. These findings lead to the rejection of both null hypotheses, H_{01} and H_{02}, confirming that perceived adequacy and perceived coverage of donor support each have a significant effect on perceived access to PHC among respondents in North Central Nigeria.

DISCUSSION OF FINDINGS

The finding that perceived adequacy of donor support has a positive and significant effect on perceived access to PHC is consistent with Ogah et al. (2024), who documented substantial capacity and service delivery gaps in FCT Abuja PHC facilities linked to resourcing shortfalls, and with the Christian Aid (2015) assessment, which found that even donor-supported PHC facilities across North Central and neighbouring states fell markedly short

of NPHCDA minimum staffing standards. This finding also lends empirical support to Andersen's Behavioural Model of Health Services Use, which identifies enabling resources, including externally funded programme inputs, as key determinants of health service engagement: where respondents perceive donor resources as insufficient relative to need, their assessment of the enabling conditions for PHC access is correspondingly diminished. The finding takes on particular urgency in light of Cummins's (2026) modelling of the 2025 USAID funding withdrawal, which projects substantial reductions in per-capita health expenditure for donor-dependent populations in Nigeria and neighbouring countries; the present paper's primary evidence suggests that North Central Nigerian communities are likely to perceive any such reduction directly through diminished perceived PHC access.

The finding that perceived coverage of donor support has a positive and significant effect on perceived access to PHC corroborates the administrative evidence documented by the National Primary Health Care Development Agency (2025), which found that the reach and effectiveness of donor-linked BHCPF implementation varied substantially across Nigerian states depending on coordination structures and partner presence. This result is consistent with Penchansky and Thomas's (1981) Theory of Access, and specifically its availability and accessibility dimensions: where donor-funded programmes are perceived to reach only a narrow subset of facilities or population groups within a community, the population outside that narrow reach experiences correspondingly constrained access, regardless of how adequately resourced the programme may be where it does operate.

Taken together, the results suggest that, of the two donor support dimensions examined, perceived adequacy exerts a marginally larger effect on perceived access to PHC than perceived coverage, based on the standardised regression coefficients, though both are clearly material and jointly explain a substantial share of the variance in respondents' perceived access. The moderate positive correlation between the two donor support constructs suggests that, in practice, communities that experience donor support as inadequate also tend to experience it as having narrow coverage, consistent with the pattern documented in the NPHCDA's (2025) state-level BHCPF implementation reporting, where the same states exhibiting coordination and capacity weaknesses tended to underperform on both dimensions simultaneously. These results underscore the urgency, given the ongoing global contraction in donor health financing (Cummins, 2026), of strengthening domestic PHC financing mechanisms in North Central Nigeria so that perceived access to PHC does not remain contingent on a financing source whose adequacy and coverage communities themselves perceive as uncertain.

CONCLUSION AND RECOMMENDATIONS

This paper examined the effect of perceived adequacy and perceived coverage of donor support on perceived access to Primary Health Care among 402 respondents surveyed across FCT Abuja, and Nasarawa State in North Central Nigeria, using a structured Likert-scale questionnaire and OLS multiple regression analysis in SPSS version 27. The findings show that perceived adequacy of donor support has a positive and statistically significant effect on perceived access to PHC, and that perceived coverage of donor support similarly has a positive and statistically significant effect, together explaining a substantial share of the variance in respondents' perceived access.

The paper concludes that, from the vantage point of the communities that rely on it, donor support remains a materially significant determinant of perceived Primary Health Care access in North Central Nigeria. This conclusion carries particular weight given the ongoing global contraction in donor health financing, most acutely illustrated by the 2025 disruption of USAID health programming, which threatens to erode both the adequacy and coverage of donor support that respondents in this paper identified as significant to their perceived PHC access, underscoring the urgency of strengthening domestic financing alternatives.

Based on the foregoing conclusion, the following recommendations are made:

i. The National Primary Health Care Development Agency and state Primary Health Care Development Boards in FCT Abuja and Nasarawa States should prioritise Basic Healthcare Provision Fund resources toward communities and facilities where perceived donor support adequacy is lowest, using community-

level perception surveys of the kind conducted in this paper to complement facility-level administrative monitoring in targeting decisions.

ii. Given the demonstrated significance of perceived coverage, state governments and development partners should work to broaden the geographic and facility-level reach of donor-supported PHC programming within North Central Nigeria, rather than concentrating support intensively in a narrow set of facilities, so that a larger share of the population directly experiences the benefits of available donor resources.

iii. In view of the accelerating global decline in donor health financing, the Federal Ministry of Health and Social Welfare and state governments should accelerate domestic resource mobilisation for PHC, including full and timely remittance of the statutory Consolidated Revenue Fund allocation to the Basic Healthcare Provision Fund, to reduce the extent to which North Central Nigerian communities' perceived PHC access remains contingent on donor support whose future adequacy and coverage cannot be assured.

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