

CARE BENIN TOGO

CONSULTATION

FINAL EVALUATION OF THE HINNOU VIVO PROJECT WITHIN THE ADJOHOUN-BONOUDANGBO HEALTHCARE ZONE

EVALUATION REPORT

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ABBREVIATIONS AND ACRONYMS

HC	Health Centre
DHS	Demographic Health Surveys
WCA	Women of childbearing age
FGD	Focus Group Discussions
AH	Area Hospital
WHO	World Health Organization
FP	Family Planning
ABD/HZ	Adjohoun-Bonou-Dangbo Healthcare Zone

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EXECUTIVE SUMMARY

The project tagged HINNOU VIVO, which kicked off in January 2015, drew to its close on 20 December 2019 following the implementation of its phase II. As usual for any project that has reached the final stage of its management cycle, the HINNOU VIVO project has been subject to a specific and unconventional final evaluation. The purpose of this final evaluation is to measure the progress made and the results obtained following its implementation, in terms of improving family planning and immunization services with regard to the evolution of the contraceptive prevalence rate within the Adjohoun-Bonou-Dangbo healthcare zone (ABD/HZ) and across the healthcare areas (health centres and beneficiary communities) within the said healthcare zone. The evaluation also aims to determine the factors of the project which proved to be determining factors in this improvement of the contraceptive prevalence rate, to assess the effectiveness of the project implementation strategy (i.e. the immunization/FP activities' integration strategy) and to assess the attitudes of healthcare providers in relation to the project results obtained.

In order to conduct the evaluation at the operational level, a rigorous methodological approach based on a sampling strategy was used to firstly identify 12 Health Centres out of 33 by a one-stage simple random selection of HCs stratified by the commune. Followed by the random selection of women of childbearing age (15 to 49 years old) and/or children (0 to 5 years old) based on the probabilistic method with a two-stage cluster technique adapted from WHO for the collection of quantitative data. With regard to qualitative community-based data, communities envisaged to participate in the focus group discussions were selected on the basis of a reasoned choice. In total, 330 women of reproductive age (15 to 49 years) and/or children (0 to 5 years) were subjected to a questionnaire as part of the survey that made it possible to calculate the modern contraceptive prevalence rate; 12 HCs through their agents and 3 project actors were consulted using individual semi-structured interview guidelines. The evaluation involved 24 participants in the discussions of the 3 focus groups organised.

In terms of treatment, the quantitative data underwent appropriate statistical processing and univariate & multivariate analyses by logistic regression were used to identify factors associated with the use of contraceptive methods. Information and data from the interviews were subjected to content analysis.

According to the evaluation results, the current contraceptive prevalence rate assessed on the basis of community-based reports stood at 25.3%. Thus, between January 2015 which corresponds to the beginning of the intervention and December 2019 marking the end of the intervention of the said project, the prevalence rate had increased from 1 to 25.3%. The share of the HINNOU VIVO project led by CARE Benin/Togo towards enhancing this prevalence rate within the Adjohoun-Bonou-Dangbo healthcare zone stood at 65.7%, proving, among others, the effectiveness of the strategy for the "integration of immunization and family planning services". 100% of the HCs (12 out of 12) visited also recognized the effectiveness of said services integration approach. The project factors associated with this improvement and duly highlighted by the theoretical model used are also mentioned in this evaluation report.

In the light of the findings, the following recommendations have been made with a view to perpetuating this experience. Notably the need to:

- Insist on the "immunisation and FP services integration" approach and on information and awareness-raising actions;
- Capitalise on the experiences drawn from the project and share them with all stakeholders;
- Advocate to the State and the TFPs for perpetuation and consolidation of the experience acquired and extend same to other health centres (HCs) and healthcare zones (HZs);
- Raise awareness on the management of children's immunization cards/records;

- Place emphasis on measures to be taken in the event of the occurrence of side effects.

1. INTRODUCTION

This introductory note is based on two main points: (i) the context and justification of the final evaluation, and (ii) a recap on the objectives of the evaluation mission.

1.1. Context and justification

The HINNOU VIVO project financed by Pfizer and in implementation since 2015 by Care Benin/Togo drew to a close in December 2019 with the completion of the project's phase II target, following the successful implementation of the project's phase I target. As a result thereof, the number of Health Centres (HCs) within the Adjohoun-Bonou-Dangbo healthcare zone targeted for the project's phase II implementation increased from 20 to 33.

The overall goal of the project is to contribute towards the reduction of maternal and infant mortality by improving the delivery of family planning (FP) and immunization services and creating an environment conducive to the entrenchment of sustainable immunization practices and the demand for modern contraceptive methods. The project's intervention approach is based on the integration of immunization and family planning services to improve contraceptive prevalence.

The HINNOU VIVO project comprises two (2) components, which are: (i) the clinical component involving activities geared towards improving the delivery of immunization and FP services, and (ii) the community component involving activities likely to increase the demand for FP services among the grassroots population.

The project drew to a close in December 2019 and the purpose of this final evaluation is to carry out a systematic and objective assessment of the HINNOU VIVO extension project scheduled to end in December 2019 with a view to ascertain if its initially planned objectives have been achieved, in accordance with the logical framework indicators established for its implementation. This evaluation seeks to draw lessons from the project implementation within the purview of proposing guidelines and recommendations towards sustaining and capitalizing on the immunization and FP services integration approach aimed at improving the contraceptive prevalence rate.

1.2. Recap on the mission objectives

1.2.1. Overall Objective

This final evaluation aims to assess the results of the HINNOU VIVO project through comparative analysis of the project indicators (right from its inception till the end of the project phase II) in order to objectively assess the progress and results achieved in terms of improvement of family planning & immunization services and demand for these services, including the situational analysis of the environment (structural, socio-cultural and gender-based barriers) of the beneficiary communities and health centres within the Adjohoun-Bonou-Dangbo healthcare zone (ABD/HZ).

1.2.2. Specific Objectives

Specifically, the final evaluation entailed:

1. measuring the project output in terms of improvement of the prevalence rate within the healthcare zone;
2. determining the project factors associated with this improvement in the contraceptive prevalence rate;

3. assess the effectiveness of the project implementation strategy (strategy for the integration of immunization/FP activities);
4. evaluate the attitudes of healthcare providers in relation to the project results obtained;
5. make relevant recommendations for the sustainability of the approach to integrate immunization and FP services for improvement of the contraceptive prevalence rate.

2. METHODOLOGICAL APPROACH ADOPTED FOR CONDUCT OF THE EVALUATION

2.1. Framework for performance of the evaluation mission

The evaluation mission was conducted within the Adjohoun-Bonou-Dangbo healthcare zone (ABD/HZ) and focused mainly on the HINNOU VIVO project beneficiary communities and health centres, subject of this final evaluation.

2.2. Type of Study

It was an observational, cross-sectional, analytical and evaluative study that comprised both qualitative and quantitative components. However, with the guidance provided during the discussion and harmonization session held on 22 November 2019, the quantitative approach was favoured due to the particular nature of this evaluation. According to the representatives of Care Benin/Togo who participated in that meeting, the particularity of this final evaluation was its non-classical nature. Indeed, its particularity resided in the assessment of the progress and results achieved in terms of improvement of the prevalence rate within the healthcare zone and in the determination of the project factors associated with this improvement of the contraceptive prevalence rate.

2.3. Population, sampling strategy and sample size

2.3.1. Target population

The evaluation mainly targeted women of childbearing age (WCA, 15-49 years) and/or children aged 0-5 years, followed by the managers of the beneficiary health centres and their healthcare staff responsible for immunization and family planning services. They were the primary target of this evaluation, which was also extended to the beneficiary communities (female and male leaders, including religious leaders), the statistician of the ABD/HZ and some project officials (manager, coordinator and person in charge of monitoring-evaluation).

2.3.2. Sampling methods and techniques

The sampling strategy comprise a one-stage simple random selection (probabilistic method) of beneficiary health centres stratified by the commune, the random selection of women of childbearing age (15 to 49 years) and/or children aged 0 to 5 years, and the reasoned selection (non-probabilistic method) of communities to participate in group discussions.

The random selection of one third (1/3) of the health centres stratified by commune (i.e. 4 HCs per commune) was adopted for the survey. In total, 12 health centres out of the 33 beneficiary health centres within the ABD/HZ (i.e. 36.7%) were selected and visited.

In addition, the sample of women of childbearing age (WCA 15-49 years) and/or children aged (0-5 years) was determined using the probabilistic method with a two-stage cluster technique adapted from WHO¹.

¹ Owing to lack of requisite residence registers, the probabilistic method based on a 3-staged simple random sampling technique originally suggested in the study protocol as a second sampling alternative, was not finally adopted.

2.3.2.1. Description of the probabilistic method based on the WHO-adapted two-stage clustering technique

This technique, which entailed the use of the list of neighbourhoods/villages per healthcare area covered by the said project, made it possible to estimate the number of women of childbearing age for the year 2018 based on the calculation of the sampled size.

a. Size Estimate

The sample size of WCA and/or children aged 0-5 years was calculated using a two-stage clustering technique based on the following Schwartz formula:

$$n = \epsilon\alpha^2 \times p \times (1-p) \times e / i^2$$

where:

n= sample size

$\epsilon\alpha^2$ = level of confidence established by deduction based on the rate of confidence (1.96 for 95%)

p= the prevalence of use of a modern contraceptive method by women aged 15-49 years at the time of the survey in Benin (p= 12%). Source: EDSB-V 2017-2018.

i= desired precision: 5 %

e= 2: cluster effect

$$n = (1,96)^2 \times 0,12 \times (1-0,12) \times 2 / (0,05)^2 = 324,54 \approx 325$$

b. Identification of the population of women of childbearing age (WCA) within the neighbourhoods in 2018

Based on the 2013 RGPH-IV estimated population size of the villages and districts covered by the health centres where the project was implemented, and on the basis of the proportion of WCA in the Ouémé department, registered as 25.88% (315,714/1,220,038) in 2016 (data provided by the 2016 Benin Health Statistics Yearbook), the number of WCA per district covered was identified for the HCs selected for the study, following the procedure below:

- Identification of the intercensal growth rate in % between 2002-2013 (11 years) in the Ouémé department, which stood at 3.69%;
- Identification of the intercensal growth rate in % between 2013-2018 (5 years) based on the following formula: $(3.69\% \times 11) / 5 = 1.67\%$;
- Calculation of the size of the population in 2018 per neighbourhood by:
 - o multiplying the intercensal growth rate in % between 2013-2018 (1.68% or 0.0168) by the size of the population in 2013 per district, the number found noted as K;
 - o then adding the 2013 population size per neighbourhood to the number K.
- Identification of the size of WCAs per neighbourhood by multiplying the proportion of WCAs (25.88%) by the 2018 population size per neighbourhood.

c. Identification of clusters

1st stage: choice of villages

This firstly consisted in the establishment of the list of villages/neighbourhoods covered by the project within the 12 healthcare areas identified by random selection with their population sizes in 2018 (i.e. number of women of childbearing age).

The total population was then aggregated (22,076 WCA). Based on the WHO recommended 30 cluster sampling, a cluster pitch was calculated by dividing the number of WCAs identified (22,076) by the number

of clusters (30) ...resulting in an output of 735.86. The first cluster was determined by randomly drawing a number between 1 and the entire part of this cluster pitch (the resulting number being 614).

The village/neighbourhood whose cumulative WCA population contained the randomly drawn number was considered as the first cluster. From the cumulative populations determined, the other clusters were determined by consecutive sample addition. The cluster chosen was the one whose cumulative population contained the number thus calculated (Cf. table of the list of neighbourhoods/villages selected for the study, annexed herewith).

2nd stage: choice of households

The pollster identified each selected village/neighbourhood centre by means of the established sampling procedure. From the village/neighbourhood centre crossroads, the pollster chose a direction at random by throwing a pen in the air. Following this direction, the pollster selected houses: the first house on the right was the first to be visited, followed by the third house, on the basis of the every-second-house technique, until the number of people (WCA and/or children aged 0 to 5 years) to be surveyed in each cluster was reached.

When there were no houses on the right and the village/neighbourhood had been crossed before the number was reached, the pollster had to return to the village/neighbourhood centre and repeat the same technique in the opposite direction until the desired number of people was reached (11 WCAs and/or 11 children aged 0-5 years).

Where a household contained several WCAs, only one was selected at random by paper ballot or by requesting an external person to choose 1 of the WCAs within the household. If the WCA has more than one child aged 0-5 years (twins inclusive), only one was selected.

Given that 30 clusters were involved and the number of WCAs per cluster was 11 (325/30), the minimum sample size amounted to **330 WCAs and/or children aged 0-5 years**.

2.3.2.2. Description of the non-probability method: the reasoned choice

This method initially concerned the actors involved in the implementation of the HINNOU VIVO project, mainly the ABD/HZ statistician, some field actors chosen by reasoned decision taking into account their capacity to provide reliable information and their availability...representing a staff of 3 persons.

Finally, with regard to the choice of participants in the group discussions, a reasoned choice of three (3) healthcare areas was made out of the twelve (12) that each hosted a focus group discussion (FGD), notably one (1) FGD per commune in a manner that ensured one (1) FGD with female leaders, one (1) FGD with men and male leaders, and one (1) FGD with religious leaders with a view to collecting additional data for the situational analysis. Thus amounting to exactly 24 by the end of the assessment.

The summary of the sample in terms of size and configuration is summarized and presented in Table I below.

Table I: Configuration and size of the sample

Healthcare Zone	Commune	HA	Village or Neighbourhood	Health Centre Official	Women of childbearing age or spouses	FGD (7 -10 persons)	Actors (ABD/HZ MC & officials of the VIVO project, MS)
ABD	Adjohoun	4	7	4	88	1 (8pers.)	[Redacted]
	Bonou	4	10	4	121	1 (8 pers.)	

	Dangbo	4	9	4	121	1 (8 pers.)	
In aggregate	3	12	26	12	330	3 (24 pers.)	3

Source: HINNOU VIVO Project's Final Evaluation Data, December 2019.

The sample size boiled down to 330 WCAs including 15 actors (HCs and project officers) and 24 participants in the facilitated focus group discussions, i.e. an **overall size of 369 participants**.

2.4. Practical implementation of the final evaluation

2.4.1. Documentary review

The relevant documents drawn up within the framework of the implementation of the HINNOU VIVO project and made available to the Evaluation Team were reviewed and used in order to have, on the one hand, a precise idea of the logical framework and indicators of the said project and, on the other hand, to retain the issues that required in-depth field review. The documentary review also enabled the design of the various tools used for the collection of (empirical) field data.

2.4.2. Elaboration and validation of the protocol and input template collection/design tools

The initial analytical information obtained from the literature review and the guidance resulting from the discussion and harmonization session held on 22 November 2019 with a select team from Care facilitated the development of a protocol for the implementation of the evaluation. This protocol established, among others, the sampling, the data collection methodology, the data analysis plan and the work schedule.

Once completed, the protocol and the tools thereof were submitted to the CARE team for validation. At the end of the validation workshop, the team of Consultants finalized the protocol and recommended tools in accordance with the terms of reference of said meeting.

Following the validation of the protocol, the technical design of the input template was initiated by means of the EpiData app. It was completed after finalisation of the validated data collection tools following a pre-test. The input template was developed to facilitate the retrieval of information to be collated using the data collection tools (guide and questionnaires). Once the application was set in motion, a data entry centre was deployed under the coordination of the Lead Consultant. The data entries were made in accordance with an input protocol developed internally.

2.4.3. Identification and training of pollsters

In addition to the statistical epidemiologist and the personal assistant of the lead consultant, six (6) pollsters were recruited, trained and mobilized for data collection purposes on 5 December 2019. The training was aimed at equipping all support staff mobilized for data collection and data entry with a view to ensuring a successful evaluation. The training was also geared at pre-testing the collection instruments with a view to their readjustment, if necessary, and their finalization.

The training was held in one venue, notably in the Dangbo health centre conference room, in accordance with the schedule defined in preparation to the training session. It was facilitated by the Lead Consultant with the support of his Associates.

The training modules covered a number of themes which were delivered in the following order:

1. The evaluation protocol;
2. The different techniques and tools for quantitative and qualitative survey identified within the framework of this evaluation;
3. The roles and responsibilities of the support staff (pollsters and data entry officers).

The training was wrapped up with the provision of a data collection staff, requisite logistical support and data collection tool kits.

2.4.4. Primary data collection and data entry

Surveys and consultations aimed at collecting information and empirical data for the implementation of the HINNOU VIVO Project were conducted from 6-13 December 2019 on an itinerant basis in the communes within the ABD/HZ. The collection kicked off in Dangbo commune, passed through Adjohoun commune and ended in Bonou commune.

The data collection techniques and tools used for this evaluation are indicated according to the target groups identified in Table II below.

Table II: Data collection techniques and tools

Target Groups	Collection techniques	Collection tools
Women of childbearing age and mothers of children under five years of age	Individual structured interview	Questionnaire
managers of beneficiary health centres, health personnel in charge of immunization and FP services, medical coordinator of the ABD/HZ, manager, coordinator and person in charge of monitoring-evaluation	Individual semi-structured interview	Interview guide
Female leaders, men and male leaders, religious leaders	Group interview or focus group	Interview guide

Source: HINNOU VIVO Project's Final Evaluation Data, December 2019.

The operationalization of the variables (for the clinical component) was based on the following procedure:

- **Dependent variable:** *use of immunization and family planning services.*
This is a dichotomous qualitative variable characterized by:
 - 1= yes if the WCAs had made use of a contraceptive method during the project period or have continued to make use of a contraceptive method or if children under five years of age have an up-to-date immunization status according to their age;
 - 0= no if the above conditions are not met.
- **Independent variables:** They were obtained by means of the questionnaire and interview guides.

Upon completion of the data collection, an internal review meeting was organized to take stock of the field activity.

2.4.5. Data processing, data analysis and drafting of the final evaluation report

2.4.5.1. Data processing

The data from the questionnaire were entered using Epi data 3.1 and analysed under Stata/SE 15.1. The database was purged and outliers were eliminated. The processing of qualitative data was done manually. In this perspective, the interview and focus group data were noted and summarized. In addition, the focus group interviews were recorded and transcribed before being analysed and interpreted.

2.4.5.2. Data analysis`

The description of the variables was done through the calculation of weighted proportions for qualitative variables, weighted means and standard deviations for variables following a normal distribution pattern. The median and interquartile range were determined for quantitative variables following an irregular distribution pattern.

Univariate and multivariate query analyses by means of logistic regression were used to identify factors associated with contraceptive use. In the multivariate analysis, only univariate variables with a $p < 0.20$ were entered into a step-down model to obtain a fitted estimate of associations. The final model was the one with significant variables above the threshold of 5%. The interactions of the variables retained in the final model were also verified. The hypothesis of proportional risks was verified via the Hosmer-lemeshow test. The results thereof were presented in the form of Odds Ratio (OR) accompanied by their 95% confidence interval (95% CI). The significance level was set at 5%.

The information and data from the interviews were subject to a content analysis. In addition, all data collected, regardless of their nature, were duly explained/described and interpreted. From an evaluative perspective, triangulation or comparative analysis proved to be necessary and even indispensable.

2.4.5.3. Drafting of the evaluation report

At the end of the evaluation assignment, a single provisional report was drafted in accordance with the recommended technical specifications contained in the TOR document, as well as the technical guidelines proposed during the scoping session. This report is structured around the following points: the methodology for implementing the evaluation, the results (data collected and their analysis), the synthesis of observations made during the evaluation, the reasons for successes and failures recorded, innovations, lessons learned and obstacles to success, recommendations based on the evidences and observations from the various stakeholders (CARE, health zone, Ministry of Health) including an analysis of the sustainability of the results and the most or least sustainable approaches.

The preliminary report was presented and discussed with stakeholders during a session held on 18 December 2018, at the Hôtel du Lac. The observations and comments of the participants thereon have been duly integrated into this evaluation report.

3. PRESENTATION OF EVALUATION RESULTS (DATA COLLECTED / ANALYSED)

3.1. Socio-demographic characteristics of the evaluation targeted population (WCAs and children)

The survey, which helped to determine the contraceptive prevalence rate, was conducted using a sample of 330 women of childbearing age (15 to 49 years) and/or infants (aged 0 to 1 year). Their demographic, economic and social characteristics are presented in Tables III and IV below.

Table III: Demographic, economic and social characteristics of WCAs within the ABD/HZ in 2019

Variables	Average. \pm AND / Med (Q1 ; Q3)	Total Number (size)	Weighted Percentages (%)
Age in years ($n = 330$)	29.92 \pm 0,37		
Level of education ($n = 330$)			
Uneducated/Illiterate		191	58.47
Primary		71	20.78
Secondary and above		68	20.75

Variables	Average. \pm AND / Med (Q1 ; Q3)	Total Number (size)	Weighted Percentages (%)
Occupation (n =330)			
Civil servant		6	2.20
Pupil/Student		12	2.94
Retailer		197	58.61
Artisan		61	19.86
Housewife		30	8.59
Farmer/stockbreeder/fisher woman		21	7
Others		3	0.80
Marital status(n =330)			
Married/living with a partner (monogamy)		224	69.52
Married/living with a partner (polygamy)		78	23.13
Divorced/separated/widowed		12	3.38
Spinster/single mother		16	3.97
Religion (n =330)			
None		4	1,31
Catholic		88	27,07
Evangelist		87	23,61
Protestant		33	10,03
Celestial Christian		87	28.98
Cherubim Seraphim		8	2.97
Endogenous/traditional		10	2,99
Muslim		13	3.03
Mother tongue (n =330)			
Wemènou		263	78.28
Goungbé		33	9.89
Fongbé		11	3.90
Yoruba		7	2.36
Tori		10	3.41
Others		6	2.15
Average income (n =282)			
≤ 40 000 f CFA		247	88.61
40 000 to 100 000 f CFA		33	10.73
>100 000 f CFA		2	0.66
Area of residence (n =330)			
Rural		285	84,91
Urban		45	15,09

Source: HINNOU VIVO Project's Final Evaluation Data, December 2019.

On the whole, 330 women of childbearing age (15 to 49 years) were retained within the framework of the implementation of this final evaluation study. The average age of these women was set between 29.92 ± 0.37 years, with a prevalence of women aged 20 to 49 years (94.09%, i.e. 307). Nearly 6 out of 10 women were educated (58.47%). The sampled women were mainly retailers (58.61%). Approximately nine out of ten women were of Christian religious belief (92.67%). 92.65% of the women were married, majority of which lived in a monogamous family setting (69.52%). In addition, nearly eight out of ten women (78.28%) belonged to the Wemènou sociolinguistic group. Lastly, about nine out of ten women earned monthly income lower than the minimum wage in Benin (88.61%) and resided in rural areas (84.91%).

Table IV hereafter presents the socio-demographic characteristics and those related to the immunization of children aged below five years included in the study.

Table IV: Socio-demographic characteristics and those related to the immunization of children aged below five years within ABD/HZ in 2019

Variables	Average. \pm AND / Med. (Q1 ; Q3)	Total number (size)	Weighted Percentages (%)
Number of children (n = 247)	1(1 ; 2)		
Age in months (n = 247)	18(8 ; 30)		
Sex (n = 247)			
Female		122	50,63
Male		125	49,37
Vaccinated children (n = 247)			
No		68	28,46
Yes, card presented		116	45,70
Yes, card not presented		63	25,84
Reason for non-vaccination of children (n = 68 per reason)			
Massif displacement of household		2	2,71
Vaccines not available		1	1,20

Source: HINNOU VIVO Project's Final Evaluation Data, December 2019.

In total, 247 children/child aged below five years were included in the study. About four out of ten surveyed women (40.53%) had children aged above two years. The male children represented a proportion of 50.63%. In addition, about three out of five women had fully immunized their children, though their health cards were not available (25.84%) at the time of the field work.

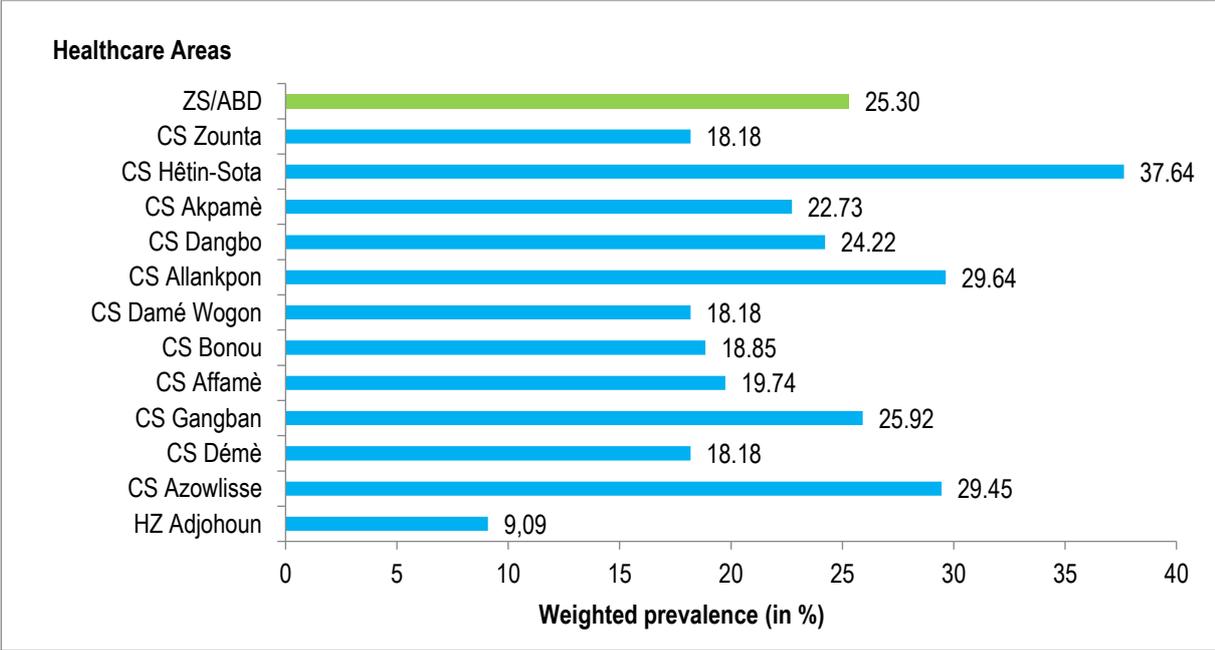
3.2. Project performance levels obtained through improvement of the prevalence rate within the health zone

3.2.1. Prevalence of use of modern contraceptive methods

According to the results of the survey conducted in December 2019, the current weighted prevalence rate of modern contraceptive method use within the ABD/HZ stood at **25.30% (79/330)**. This is different from the 16.7% rate estimated by Care Benin/Togo and the 17.34% rate obtained from the ABD/HZ Statistics Unit. The differences observed during the assessment of modern contraceptive prevalence were hinged on the methodological approaches used and the sampling strategy recommended. However, it must be noted that this prevalence rate of 25.30% was not uniform throughout the ABD/HZ jurisdictional area,

owing to the disparities observed across the healthcare areas, as shown in Figure 1 below, which presents the prevalence rate of contraceptive method use by healthcare area within the ABD/HZ for the year 2019.

Figure 1: Prevalence of contraceptive method use by healthcare area within the ABD/HZ in 2019



Source: HINNOU VIVO Project’s Final Evaluation Data, December 2019.

Four out of twelve healthcare areas (33.33%), at the time of the study, had a higher FP method use prevalence than those within the ABD healthcare zone. These comprised the Hêtin-sota health centre, which came first with 37.64%, followed respectively by the Allankpon health centre (29.64%), the Azowlissè health centre (29.45%) and the Gangban health centre (25.92%).

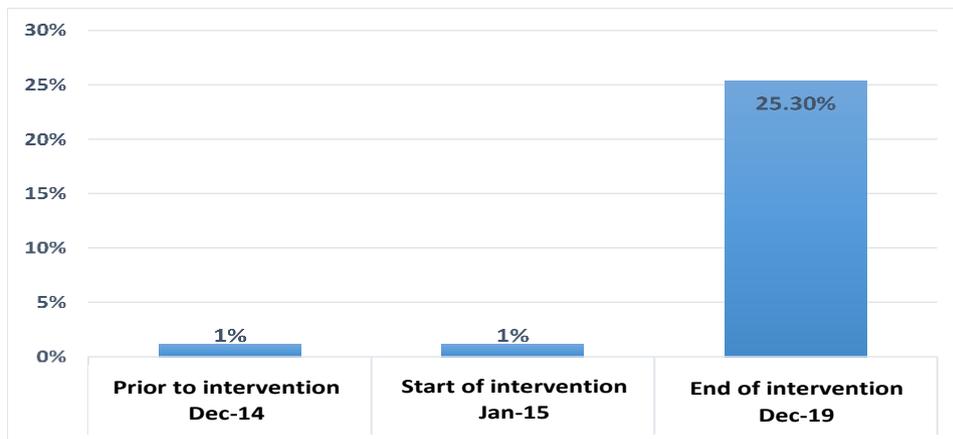
Among the health centres with a prevalence rate lower than that of the healthcare zone was the Adjohoun area hospital, which stood at a rate of 9.09%.

3.2.2. Evolution of modern contraceptive prevalence prior to and at the end of the HINNOU VIVO project intervention

At the kick-off of the HINNOU VIVO project in January 2015, the contraceptive prevalence rate stood at 1.15% according to the Statistics Unit within ABD healthcare zone and at 3% according to the (power point) presentation document. At the end of the intervention in December 2019, the contraceptive prevalence rate stood at 25.30% according to the survey conducted within the communities in the framework of this evaluation.

Figure 2 below shows the differential in prevalence rates prior to the intervention, at the beginning of the intervention and at the end of the intervention.

Figure 2: Weighted prevalence rate of contraceptive use within the ABD/HZ from 2014 to 2019



Source: ASS_ZS_ABD: Adjohoun/Bonou/Dangbo Healthcare Zone Statistics Yearbook
Eva_finale: Final Project Evaluation

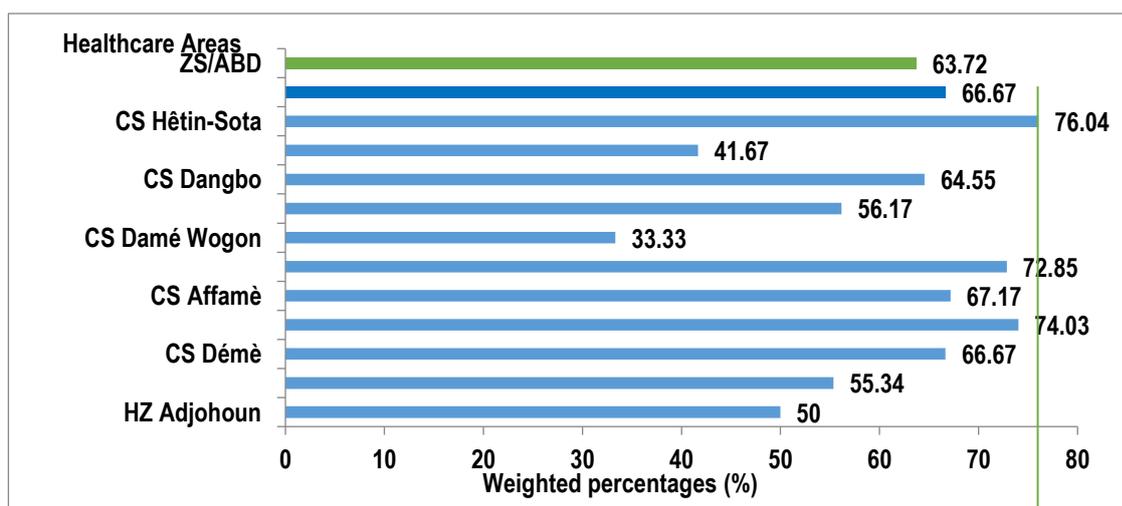
From January 2015 to December 2019, the prevalence rate in this part of the country increased by 24.30%. As there were other stakeholders also actively involved in the promotion of modern contraceptive methods within the ABD/HZ, Care Benin/Togo's share was sought in terms of contribution towards the achievement of this 25.3% prevalence rate.

Thus, according to the results of the survey conducted as part of the final evaluation, **Care Benin/Togo's share in the enhanced 25.3% prevalence rate was 65.7%.**

3.2.3. Evolution of the proportion of women who continued or abandoned the use of contraceptive methods prior to and at the end of the HINNOU VIVO Project intervention

The study estimated that the weighted percentage of women currently using family planning (FP) among those who reported using it since January 2015 stood at 63.72% (79/130) within the ABD/HZ. Said estimate varied according to the healthcare areas as shown in Figure 3 below.

Figure 3: Weighted percentages of women currently using FP among those who reported using it since January 2015, by healthcare area within the ABD/HZ.



Source: HINNOU VIVO Project's Final Evaluation Data, December 2019.

Seven out of twelve healthcare areas (58.33%) have a higher weighted percentage of women currently using FP among those who have reported using it since January 2015 than that within the ABD/HZ. These comprised the health centres of Zounta, Hêtin-sota, Dangbo, Bonou, Affamè, Gangban and Démè.

3.2.4. Contraceptive methods adopted, reasons given for their use or non-use within the ABD/HZ

The modern contraceptive products used and the reasons for their use or discontinuation are presented in Table V below.

Table V: Contraceptive methods used, reasons for the use or non-use of these methods within the ABD/HZ in 2019.

Variables	Total number (size)	Weighted Percentages (%)
Contraceptive methods used (n = 79 per method)		
Implant	50	65,30
Injectable	16	21,77
IUD	10	12,01
Pill	3	2,43
Male condom	2	1,92
Female condom	1	1,78
Tubal ligation	1	1,37
Reasons for use (n = 79 per reason)		
Very easy to use method	38	50,35
Choice guided by family and friends	23	30,14
Free of charge method	24	29,58
Other reasons	23	29,21
Health worker-directed choice	22	29
Less expensive method	4	4,71
Choice imposed by the partner	3	3,11
Reasons for discontinuing use (n = 51 per reason)		
Desire to conceive	20	40,53
Side Effects	12	23,31
Other reasons	7	14,09
Refusal by partner	7	12,72
Bleeding after injection or implant	6	11,78
Didn't want	3	4,22
Refusal by/fear of relatives	1	2,63
Painful method	2	4,63
Religious reasons	2	3

Source: HINNOU VIVO Project's Final Evaluation Data, December 2019.

The three most commonly used FP methods are: implants (65.30%), injectables (21.77%), and Intra-Uterine Devices (IUDs 12.01%). These methods are more used by women because they are either very easy to use (50.35%), free of charge (29.58%), or either referred or advised by a health worker (29%), according to the statements of the women interviewed.

However, the desire for motherhood and the manifestation of the side effects of these methods are the two main reasons for discontinuing their use, representing 40.53 % and 23.31 % respectively.

3.3. Use of services offered by the HINNOU VIVO Project

3.3.1. Characteristics related to the use of services offered by the project

Patently, the characteristics related to the use of the services offered in the implementation of this project were also addressed by the evaluation. Table VI below provides further information and details.

Table VI: Characteristics related to the use of services offered by the project within the ABD/HZ

Variables	Total number (size)	Weighted percentages (%)
Sensitization/counselling on EPI by a FP service provider (n=330)		
Yes	245	76.30
No	85	23.70
Sensitization/counselling on FP via postnatal immunization (n=330)		
No	43	10.92
Yes	272	83.83
Didn't opt for postnatal immunization	15	5.25
Period of WCA sensitization on FP or EPI (n=272)		
Before January 2015	56	20.17
January 2015 till date	216	79.83
Sensitization/counselling on FP by an EPI service provider (n = 330)		
Yes	222	68.34
No	108	31.66
Sensitization/counselling on FP and EPI by a facilitator/catalyst (n = 330)		
Yes	58	20.10
No	272	79.90
Free services (n = 330)		
Yes	222	69.19
No	108	30.81
Accessibility to FP/ immunization service (n=330)		
Yes	270	82.69
No	60	17.31
Sensitization/counselling on FP and EPI by a close relation (relatives/friends/neighbours) or the media (n = 330)		
Yes	36	10.80
No	294	89.20

Source: HINNOU VIVO Project's Final Evaluation Data, December 2019.

About eight out of ten women had been informed about FP and EPI since January 2015 (79.83%). Nearly seven in ten women reported having received FP counselling from the EPI service provider (68.34%). On the other hand, two in ten women report having been informed by catalysts (20.10%). The free services offered by the project were mentioned by 69.19% of the women surveyed.

3.3.2. Project factors associated with this improvement in the contraceptive prevalence rate

3.3.2.1. Univariate analysis

Tables VII, VIII and IX below present the results of the univariate analysis between contraceptive method use within the ABD/HZ and socio-demographic characteristics, followed by project-related characteristics.

Table VII: Univariate analysis between contraceptive method use within the ABD/HZ and socio-demographic, economic and social characteristics in 2019

Independent variables	OR _{gross} (non-adjusted)	CI _{95%}	P-value
Age in years	1.04	[1.00 ; 1.09]	0.050*
Level of education			
Uneducated/Illiterate	1.00		
Primary	2.25	[0.77 ; 6.57]	0.131
Secondary and university	1.41	[0.81 ; 2.46]	0.204
Occupation			
Housewife	1.00		
Retailer	4.28	[1.19 ; 15.36]	0.027*
Artisan	4.57	[1.13 ; 18.44]	0.034*
Farmer/stockbreeder/fisher woman	2.49	[0.53 ; 11.56]	0.231
Others (Civil servant, Pupil/Student)	9.93	[1.81 ; 54.33]	0.010*
Marital status			
Unmarried (Divorced/Separated/Widowed/Single)	1.00		
Married/living with a partner (monogamy)	1.81	[0.39 ; 8.23]	0.427
Married/living with a partner (polygamy)	1.77	[0.33 ; 9.28]	0.483
Religion			
Endogenous/traditional	1.00		
Catholic	1.09	[0.36 ; 3.23]	0.870
Evangelist	0.92	[0.38 ; 2.22]	0.858
Protestant	1.14	[0.33 ; 3.91]	0.822
Celestial Christian / Cherubim Seraphim	0.70	[0.32 ; 1.51]	0.355
Muslim	1.04	[0.17 ; 6.11]	0.962
Mother tongue			
Wemènou	1.00		
Goungbé	1.45	[0.65 ; 3.26]	0.346
Fongbé	3.44	[1.96 ; 6.06]	0.000*
Tori	0.63	[0.24 ; 1.63]	0.334
Yoruba and others	1.47	[0.37 ; 5.82]	0.569
Average income			
≤ 40 000 f CFA	1.00		
40 001 f CFA and above	2.53	[1.30 ; 4.93]	0.008*

Independent variables	OR _{gross} (non-adjusted)	CI _{95%}	P-value
Area of residence			
Rural	1.00		
Urban	1.23	[0.72 ; 2.10]	0.430

* : p-value ≤ 5%

Source: HINNOU VIVO Project's Final Evaluation Data, December 2019.

At the end of the univariate analysis, age ($p = 0.050$), education ($p = 0.131$), occupation ($p = 0.010$), mother tongue ($p = 0.000$) and monthly income ($p = 0.008$) were significantly within the 20% threshold and are therefore used in the initial model.

Opting age in years significantly multiplied, by 1.04, the chance for a woman to make use of a FP method ($p \leq 5\%$). Moreover, women in occupations such as retailers or artisans or others (civil servants, pupils/students) make use of FP methods 4.28 times, 4.57 times and 9.93 times more than housewives ($p \leq 5\%$). Furthermore, a woman is 3.44 times more likely to use a FP method when her mother tongue is Fongbé compared to women who speak Wémènou ($p \leq 5\%$). Finally, a monthly income of above 40,000 CFA francs multiplies a woman's chance of using a contraceptive method by 2.53 compared to a monthly income less than or equal to this amount ($p \leq 5\%$).

Table III : Univariate analysis between contraceptive method use within the ABD/HZ and socio-demographic characteristics, as well as those related to the immunization of children under five years of age within the ABD/HZ in 2019

Variables	OR _{gross} (non-adjusted)	CI _{95%}	P-value
WCA with at least one child under five years			
Yes	1.28	[0.68 ; 2.42]	0.417
No	1.00		
Number of children	0.84	[0.54 ; 1.30]	0.438
Age in months			
0 – 5	1.00		
6 – 11	5.62	[0.85 ; 36.84]	0.070
12 – 23	7.11	[1.43 ; 35.29]	0.018*
24 – 59	9.47	[1.54 ; 58.09]	0.017*
Sex			
Female	1.00		
Male	1.29	[0.76 ; 2.21]	0.326
Vaccinated children			
No	1.00		
Yes, card presented	1.80	[0.79 ; 4.10]	0.152
Yes, card not presented	1.67	[0.61 ; 4.55]	0.296

Variables	OR _{gross} (non-adjusted)	CI _{95%}	P-value
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* : p-value ≤ 5%

Source: HINNOU VIVO Project's Final Evaluation Data, December 2019.

At the end of the univariate analysis, the age of children (p = 0.017) and children vaccinated (p = 0.152) were significantly within the 20% threshold and were therefore used in the initial model.

A woman with a child aged 12 to 23 months or 24 to 59 months makes use of FP methods 7.11 times and 9.47 times respectively, more often than a woman with a child aged less than six months (p ≤ 5%).

Table IX: Univariate analysis between contraceptive method use within the ABD/HZ and characteristics related to the services offered by the project

Independent variables	OR _{gross} (non-adjusted)	CI _{95%}	P-value
Sensitization/counselling on EPI by a FP service provider			
Yes	5.65	[2.47 ; 12.92]	0.000*
No	1.00		
Sensitization/counselling on FP via postnatal immunization			
No	1.00		
Yes	11.65	[1.59 ; 85.02]	0.017*
Didn't opt for postnatal immunization	10.91	[1.24 ; 95.39]	0.032*
Period of WCA sensitization on FP or EPI			
Before January 2015	1.00		
January 2015 till date	1.11	[0.55 ; 2.23]	0.746
Sensitization/counselling on FP by an EPI service provider			
Yes	2.34	[0.95 ; 5.76]	0.062
No	1.00		
Community dialogue on FP and EPI provided by a catalyst			
Yes	10.73	[5.01 ; 22.98]	0.000*
No	1.00		
Free services			
Yes	1.04	[0.50 ; 2.16]	0.893
No	1.00		
Accessibility to FP/ immunization service			
Yes	20.70	[3.43 ; 124.77]	0.002*
No	1.00		

Independent variables	OR _{gross} (non-adjusted)	CI _{95%}	P-value
Sensitization/counselling on FP and EPI by a close relation (relatives/friends/neighbours) or the media			
Yes	10.56	[3.94 ; 28.31]	0.000*
No	1.00		

Source: HINNOU VIVO Project's Final Evaluation Data, December 2019.

At the end of the univariate analysis, the sensitization/counselling on EPI by an FP service provider ($p = 0.000$), the sensitization/counselling on FP via postnatal immunization ($p = 0.017$), the sensitization/counselling on FP by an EPI service provider ($p = 0.062$), Community dialogues on FP and EPI organized by a catalyst ($p = 0.000$), accessibility to FP/ immunization services ($p = 0.002$) and sensitization/counselling on FP and EPI by a close relation (relatives/friends/neighbours) or the media ($p = 0.000$) were significantly within the 20% threshold and were therefore used in the initial model.

A woman is 11.65 times more likely to make use of a FP method when sensitized or counselled on FP via postnatal immunization than others ($p \leq 5\%$). The sensitization/counselling on EPI by an FP service provider increases a woman's chance of making use of a FP method by 5.65 times ($p \leq 5\%$).

Community dialogues on FP and EPI organized by catalysts increase a woman's chance of making use of a FP method by 10.73 ($p \leq 5\%$). A woman is 10.56 times more likely to make use of a FP method when awareness-raising or counselling is done by relatives or friends or neighbours or the media than others ($p \leq 5\%$). A woman who reported that services were accessible was 20.70 times more likely to make use of a FP method than others ($p \leq 5\%$).

3.3.2.2. Multivariate analysis

The multi-variate analysis was conducted to identify project factors associated with the use of modern contraceptive methods within the ABD/HZ in 2019.

A total of thirteen (13) variables were introduced into the initial model:

- Socio-demographic, economic and social characteristics of women: age, level of education, mother tongue, monthly income, occupation;
- Socio-demographic characteristics of children and those related to their vaccination age of children, complete vaccination;
- Characteristics related to the services offered by the project: sensitization/counselling on EPI by an FP service provider, sensitization/counselling on FP via postnatal immunization, sensitization/counselling on FP by an EPI service provider, community dialogues on FP and EPI provided by a catalyst, accessibility to FP/immunization service, sensitization/counselling on FP and EPI by a close relation (relatives/friends/neighbours) or the media.

Table X below presents the final model of the multivariate analysis of the project factors associated with the use of contraceptive methods.

Table X: Final Model of the Project's Social and Economic Factors Associated with Contraceptive Use within the ABD/HZ in 2019

Variables	OR _{adjusted}	CI _{95%}	P-value
Mother tongue			
Wemènou	1.00		
Goungbé	1.23	[0.49 ; 3.11]	0.639
Fongbé	4.25	[1.33 ; 13.58]	0.016
Tori	0.98	[0.25 ; 3.73]	0.981
Yoruba and others	4.43	[1.05 ; 18.61]	0.042
Average income			
≤ 40 000 f CFA	1.00		
40 001 f CFA and above	3.02	[1.49 ; 6.11]	0.003
Sensitization/counselling on EPI by a FP service provider			
Yes	9.57	[1.94 ; 47.04]	0.007
No	1.00		
Sensitization/counselling on FP by an EPI service provider			
Yes	11.44	[5.58 ; 23.44]	0.000
No	1.00		
Sensitization/counselling on FP and EPI by a close relation (relatives/friends/neighbours) or the media			
Yes	10.27	[3.35 ; 31.46]	0.000
No	1.00		

Source: HINNOU VIVO Project's Final Evaluation Data, December 2019.

In multivariate analysis, the variables associated with the use of FP within the ABD/HZ were: mother tongue ($p = 0.019$ and 0.025), monthly income ($p = 0.004$), sensitization/counselling on EPI by a FP service provider ($p = 0.032$), sensitization/counselling on FP by an EPI service provider ($p = 0.050$), community dialogues on FP and EPI provided by a catalyst ($p < 0.05$), sensitization/counselling on FP and EPI by a close relation (relatives/friends/neighbours) or the media ($p < 0.05$). No interaction between these variables was found.

Adjusted on the other variables, a woman is 3.78 times and 5.19 times more likely to use a FP method when her mother tongue is Fongbé and Yoruba respectively. A monthly income of more than 40,000 CFA francs increases a woman's chance of using a contraceptive method by a factor of 3.28 when adjusted on all other variables. Adjusted on other variables, a woman is 2.86 times more likely to use an FP method when sensitized or counselled on FP by an EPI service provider. Sensitization/counselling on EPI by a FP service provider increases a woman's chance of using a FP method by 6.81 when adjusted on all other variables.

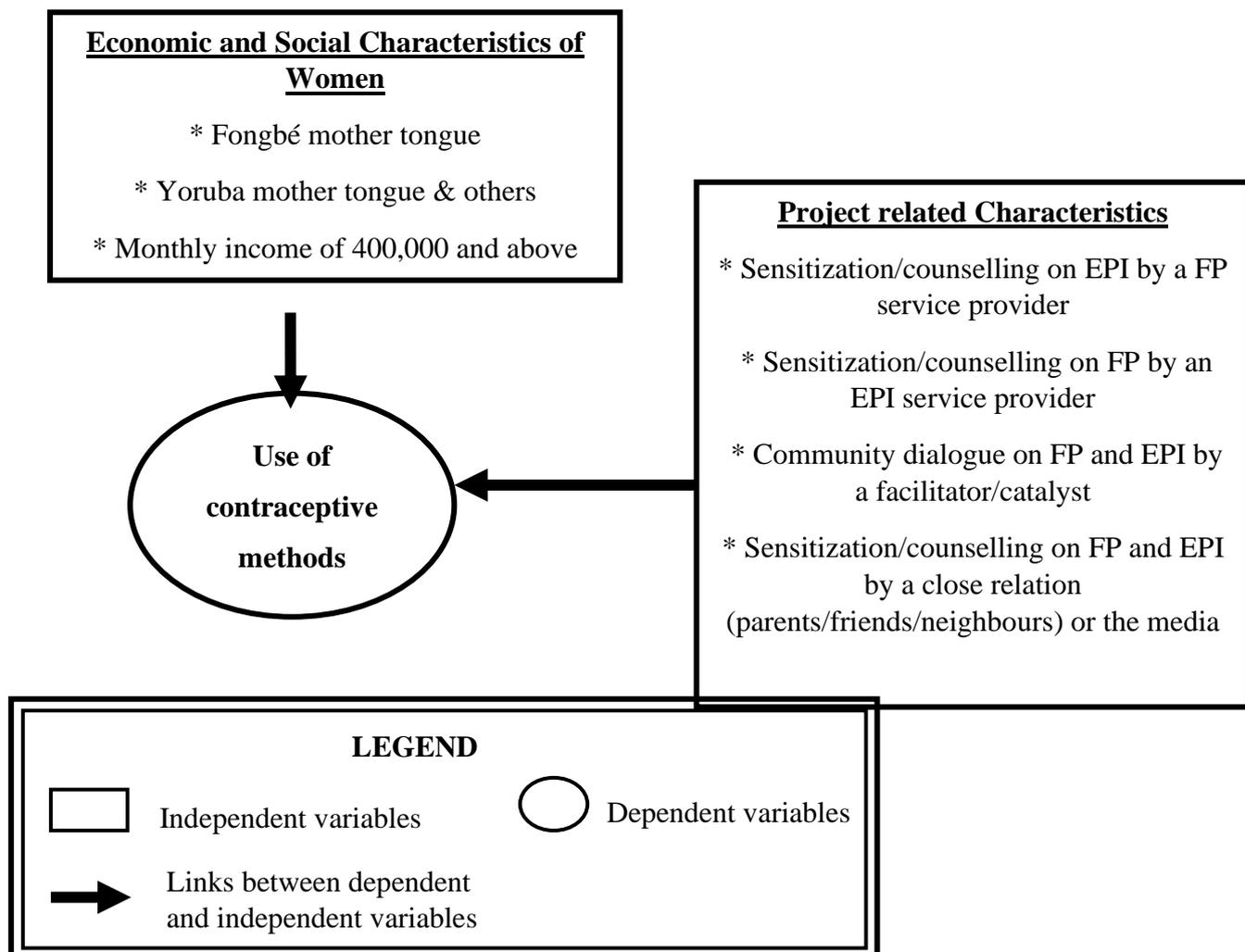
Community dialogues on FP and EPI organized by catalysts increase by 10.43 the chance for a woman to make use of a FP method adjusted on all other variables. Adjusted on all other variables, a woman is 13.39 times more likely to use a FP method when sensitized and counselled by relatives or friends or neighbours or the media.

According to the **Hosmer-Lemeshow test**, the proportional risk hypothesis was tested ($p = 0.7065$). The final model was adequate for the purpose since the p-value obtained was greater than 0.05 (5%). All the variables used in the final model account for **36.68%** of contraceptive method use within the areas covered by the HINNOU VIVO project within the Adjohoun/Bonou/Dangbo healthcare zone.

3.3.2.3. Final conceptual framework

The final conceptual framework for this evaluation was as follows:

Figure 4: Final Conceptual Framework for the Project Study on Factors Associated with Contraceptive Method Use within the ABD/HZ in 2019



Source: HINNOU VIVO Project's Final Evaluation Data, December 2019.

3.4. Assessing the effectiveness of the project's "immunization and family planning services integration" approach

Based on the 25.3% prevalence rate obtained after five (5) years of implementation, it is clear that the project's "immunization and family planning services integration" approach is effective. However, this question was directed to the managers of the 12 health centres in order to garner their opinions. Their reactions thereto are presented in Table XI below.

Table XI: Opinions of the managers of the 12 HCs on the effectiveness of the approach

Modality	YES [candid]	YES [reserved]	NO
Akpamè HC	1	0	0
Bonou-centre HC	0	1	0
Allankpon HC	1	0	0

Dangbo Centre HC	1	0	0
Azowlissè HC	1	0	0
Adjohoun HC	1	0	0
Hétin-Sota HC	1	0	0
Affamè HC	0	1	0
Damè Wogon HC	1	0	0
Zounta HC	1	0	0
Gangban HC	1	0	0
Dèmè HC	1	0	0
In aggregate	10	2	0

Source: HINNOU VIVO Project's Final Evaluation Data, December 2019.

The response "YES" prevailed with a proportion of 100%. However, it should be noted that 2 out of 12 HCs (16.6%) felt that they had not been able to achieve the objectives assigned to them. The strategy in its design through immunization and counselling sessions, advanced strategies and the organization of community dialogues by catalysts from the community and the involvement of influential persons facilitated interactions between the HCs and the communities and enable the easy outreach to practically all members of the beneficiary communities, in this case women of childbearing age and men.

CONCLUSION AND RECOMMENDATION

As can be observed, this final evaluation of the project tagged HINNOU VIVO has made it possible to take stock of the progress made after five (5) years of implementation and to identify the project factors associated with the improvement of modern contraceptive prevalence within the Adjohoun-Bonou-Dangbo healthcare zone (ABD/HZ). It also made it possible to highlight the weight of the contribution of the HINNOU VIVO project towards attaining the current 25.3% contraceptive prevalence rate...its share being equivalent to 65.7%. In view of these key results, CARE Benin/Togo through the implementation of its HINNOU VIVO project is positioned as the prime contributor towards the improvement of the prevalence rate in this part of South-East Benin. Despite its successes, the HINNOU VIVO project is still facing some major challenges that need to be addressed.

It is in this perspective that the following recommendations are made:

- Insist on the "immunisation and FP services integration" approach and on information and awareness-raising actions;
- Capitalise on the experiences drawn from the project and share them with all stakeholders;
- Advocate to the State and the TFPs for perpetuation and consolidation of the experience acquired and extend same to other health centres (HCs) and healthcare zones (HZs);
- Raise awareness on the management of children's immunization cards/records;
- Place emphasis on measures to be taken in the event of the occurrence of side effects.

Table XII: List of neighbourhoods/villages selected for the study

Communes	Healthcare areas	Neighbourhoods/villages covered	Total pop. in 2013 [a]	Total pop. in 2018 [b=(a*0,0168)+a]	WCA headcount [c=b*0,2588]	WCA cumulative headcount	Number of Clusters [d]	Number of WCA to be surveyed [e=d*11]
Adjohoun (11)	Adjohoun HZ	Houekpa-Kpota	840	854	221	221		
		Abato,	676	687	178	399		
		Allanzounmè	1589	1616	418	817	1	11
		Sikandji/AnameKindji	387	393	102	919		
	Azowlisse HC	Akouèhan-Tohouè	1034	1051	272	1191		
		Gbedogo-Oudanou	1366	1389	359	1550	1	11
		Kpodédji	1402	1426	369	1919		
		Klogbomè	704	716	185	2105	1	11
		Abéokouta	1874	1905	493	2598		
		Cadébou-Zounmè	1572	1598	414	3011	1	11
	Démè HC	Sissèkpa	1659	1687	437	3448		
		Démè	695	707	183	3631	1	11
		Fanvi	902	917	237	3868		
		Ahlan	438	445	115	3983		
	Gangban HC	Gla	302	307	79	4063		
		Ahouandjannafon	890	905	234	4297	1	11
		Togan-Hounsa						
Lowé		807	821	212	4509			
Bonou (10)	Affame HC	Gangban-centre	5087	5172	1339	5848	2	22
		Agonlin	1554	1580	409	6257		
		Agbosso/Agbosso-Kota	2109	2144	555	6812	1	11
		Dasso	847	861	223	7035		
		Sota	768	781	202	7237	1	11
		Zomayi/ Zoukou	1292	1314	340	7577		
	Bonou HC	Wovime	1100	1118	289	7866		
		Affame Centre	1617	1644	425	8292	1	11
		Akpenamihoue/ Lokossa	162	165	43	8334		
		Atchabita	619	629	163	8497		
		Agbonan	4748	4828	1249	9747	2	22
		Tovoh						
		Azongbossa	490	498	129	9876		
	Damé Wogon HC	Ayogo	339	345	89	9965		
		Bonou Centre	3268	3323	860	10825	1	11
		Sotinkanme						
	Allankpon HC	Ouebossou	2435	2476	641	11466	1	11
Damé wogon		1031	1048	271	11737	1	11	
Avrankanmé		1246	1267	328	12065			
Dangbo (12)	Dangbo HC	Gnanwouizoumé	473	481	124	12189		
		Allankpon	2169	2205	571	12760	1	11
		Adido	2634	2678	693	13453	1	11
		Attankpè	1736	1765	457	13910	1	11
		Dangbo centre	6033	6134	1588	15497	2	22
	Akpame HC	Dangbohonmé/ Dogla	2329	2368	613	16110	1	11
		Mondotokpa	1219	1239	321	16431		
		Ké	1898	1930	499	16930	1	11
		Dokomé	821	835	216	17147		
		Tovè	538	547	142	17288		
		Akpame	4391	4465	1155	18444	2	22
		Hondji	1880	1912	495	18938		
Hetin-Sota HC	Hetin-Glehoue	404	411	106	19045	1	11	
	Glahounsa	3445	3503	907	19951	1	11	
	Seme/KODONOU	2229	2266	587	20538	1	11	
	Hetin-Sota	3709	3771	976	21514	1	11	
Zounta HC	Zounta Aga/Zounta Do	2137	2173	562	22076	1	11	