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## **Social and Behaviour Change Communication Pre- & Post-test Comparative Analysis: Maternal Nutrition Topic Module**

Gender Transformative and Nutrition-sensitive Project 2019-  
2021(2023) in Chemba District, Sofala Province, Mozambique

This project is generously funded by the Austrian Development Agency (ADA).



<b>Country</b>	Mozambique
<b>Project Title</b>	Reaching the furthest behind first: Gender Transformative and Nutrition-sensitive programming to increase food and nutrition security for women, adolescent girls, and children in Chemba district, Sofala province
<b>Geographic area</b>	Chemba District, Sofala Province
<b>Sessions Conducted (6)</b>	May - June 2021
<b>Analysis Conducted</b>	June - August 2021
<b>Cooperating Partners</b>	Government of Mozambique Pathfinder International
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*Front cover photo caption: A mother with her child in Mulima*

*Credit: Allyson Vertti (2021)*

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# Pre- & Post-test Comparative Analysis: Maternal Nutrition Topic Module

## Executive Summary

Social and Behaviour Change Communication (SBCC) is an evidence-based strategy to improve health and nutrition by increasing and improving knowledge, attitudes and practices (KAP). The Gender Transformative and Nutrition-Sensitive (GTNS) project implements SBCC activities, in parallel to resilience and post-harvest loss interventions, with the aim of contributing to women's empowerment and stunting reduction among children in Sofala, Mozambique. The SBCC strategy uses three approaches to achieve this aim: community mobilization, interpersonal counselling and media. Activities under the three approaches are categorized into three main themes within the project: Nutrition, Gender, and Sexual and Reproductive Health.

The Nutrition theme is further subdivided into four topic modules: infant and young child feeding (IYCF), maternal nutrition, malaria prevention, and sanitation and hygiene. This report focuses on the interpersonal counselling approach of the Maternal Nutrition topic module. These sessions targeted all 1,500 project households, specifically caregivers of children under 2 and their spouses.

When implementing SBCC activities particularly aimed at reducing or preventing stunting, it is essential to engage in robust monitoring as behavioural change is a slow process and may not significantly impact project outcomes when looking solely at end line indicators. Nevertheless, this does not mean project efforts are not making progress at the individual level. Closely tracking knowledge, attitudes and practices linked to reducing and preventing stunting can guide project implementers in better understanding willingness to change and actual change related to desired outcomes. To measure the project's influence on beneficiaries, the project conducted pre- and post-test surveys on a sample of approximately 120 beneficiaries immediately before and after each interpersonal counselling topic module, focusing questions on knowledge, intention, self-efficacy (confidence) and self-reported behaviour. Using a comparative analysis, this report presents the findings regarding the Maternal Nutrition topic module.

The Maternal Nutrition pre- and post-test questionnaire consisted of eight questions in four categories:

- recalling key maternal nutrition messages
- understanding how a mother's health impacts the first 1,000 days of life
- a mother's health and diet during pregnancy and lactation
- men's role in maternal nutrition

Project beneficiaries in Chemba District associate a proper diet with healthy pregnancy and possess awareness of the impact that diet and care have on the health of infants and their mothers. The pre-test results reflect this wisdom, indicating a fair amount of knowledge, favourable attitudes and good practices regarding maternal nutrition. Nevertheless, findings have demonstrated a clear positive influence across all of the 8



indicators when comparing pre- and post-test results for maternal nutrition, particularly understanding the need for pregnant and lactating women to attend regular health screenings and eat a diverse and balanced diet.

## I. Background

The Gender Transformative and Nutrition-sensitive (GTNS) pilot project, titled *“Reaching the furthest behind first: Gender Transformative and Nutrition-sensitive programming to increase food and nutrition security for women, adolescent girls, and children in Chemba district, Sofala province”* is implemented by the World Food Programme (WFP) under the leadership of the Government of Mozambique, and in close coordination with Government and cooperating partners. The project receives multi-year funding from the Austrian Development Agency (ADA). The catchment area is limited to Mulima locality of the Mulima Administrative Post of Chemba District. The population of Chemba is 87,925 people (17,730 households), and the project aims to reach 7,500 people (1,500 households) using the criteria of at least 500 pregnant and lactating women (PLW), 500 adolescent girls, 750 children under 2 (CU2), and women living with obstetric fistula; an additional 20,000 people will be reached indirectly through Social and Behaviour Change Communication (SBCC) media activities.

The GTNS project directly supports the priorities of the Government of Mozambique and is fully aligned to WFP’s Country Strategic Plan 2017-2021. The aims of the project are to improve gender equity and women and adolescent girls’ empowerment; increase dietary diversity; and reduce stunting among girls and boys under 5 in the context of a changing climate. The project design is innovative and integrates multiple nutrition-specific and -sensitive interventions to address the determinants of malnutrition, with a focus on women’s empowerment. It combines:

- i) construction of gender- and nutrition-sensitive household and community assets (fuel efficient cooking stoves, water catchment systems, household gardens and afforestation);
- ii) trainings on post-harvest loss for smallholder women and men farmers (food conservation, transformation and storage) and linkages to improved products (hermetic storage); and
- iii) multi-level SBCC activities implemented at individual, household and community level<sup>1</sup>

## II. Social and Behaviour Change Communication

SBCC is a crucial evidence-based strategy to improve health and nutrition by increasing and improving knowledge, attitudes and practices. The GTNS project’s SBCC component

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<sup>1</sup> In parallel to its SBCC activities, the GTNS project is also generating demand for acute malnutrition treatment, including community-level mid-upper arm circumference (MUAC) screening of PLW and children under 5 (CU5) and referrals of malnourished cases by volunteer community health workers. If screening indicates malnourishment, PLW and CU5 are referred to their local health facility for further treatment. This activity is not included in the pre- & post-test questionnaire and results can be found in the SBCC routine monitoring.

is being implemented by WFP’s SBCC partners<sup>2</sup> through three approaches: interpersonal counselling, media (radio), and community mobilisation (see Figure 1). Combining dynamic approaches to engage men for gender equality and behaviour change with nutrition-sensitive programming is expected to facilitate sustainable results at the household level, which can be cascaded to the wider community for replication.



\*due to the COVID-19 pandemic theater performances have been adapted to a media modality

Figure 1: The three approaches of the GTNS Project SBCC strategy

The GTNS project categorizes SBCC into three main themes: Nutrition, Gender, and Sexual and Reproductive Health (SRH). The Nutrition theme is further subdivided into four topics: maternal nutrition, infant and young child feeding (IYCF), malaria prevention, and sanitation and hygiene (S&H). These four topics comprise the WFP standard SBCC package and target all 1,500 project households, focusing on caregivers of CU2 and their partners. Topic modules consist of six sessions, facilitated by community health worker pairs who are trained and supervised by field partners.<sup>3</sup>

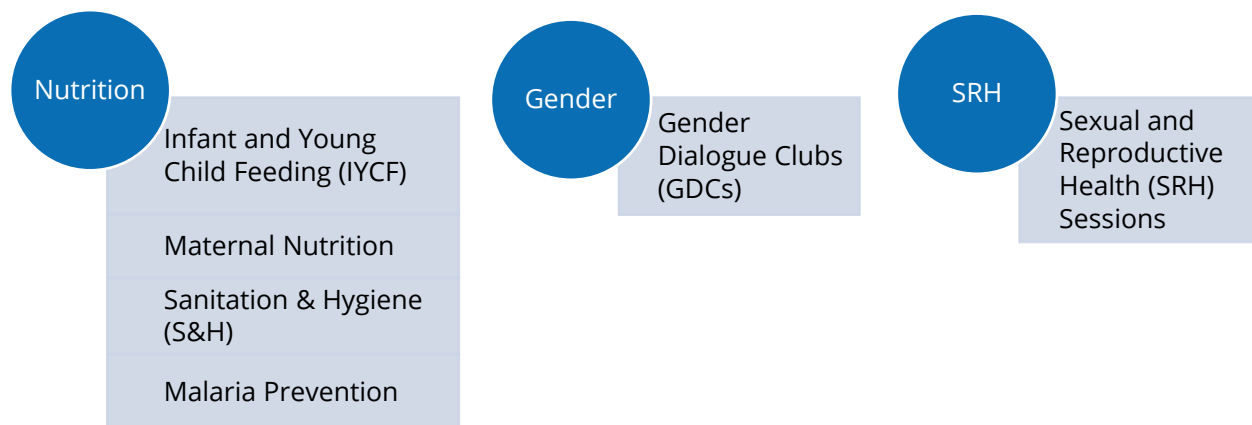


Figure 2: SBCC themes and topics of the GTNS Project

To evaluate the efficacy of SBCC activities, the GTNS project conducted pre- and post-testing to compare and analyse beneficiary knowledge, intention, confidence and self-

<sup>2</sup> District Services of Health, Women and Social Action (SDSMAS), Pathfinder International and PCI Media

<sup>3</sup> Gender Dialogue Clubs consist of complex and sensitive concepts and will therefore be mainly facilitated by implementing partner field staff with some community health worker support.

reported behaviour. The pre- and post-test exercise focused on interpersonal counselling sessions, excluding food processing demonstrations.

### III. Aim and Objective of Pre- and Post-testing

When implementing SBCC activities, particularly those aimed at reducing or preventing stunting it is essential to engage in robust monitoring, as behavioural change is a slow process and may not significantly impact project outcomes when looking solely at end line indicators. Unlike the baseline and end line evaluation that focuses on whether the programme worked, regular monitoring focuses on systematic tracking of activities to assess the effectiveness of implementation efforts. This analysis also serves as evidence for project impact.

*The main aim of pre- and post-testing was to understand the influence of interpersonal counselling sessions on project beneficiary knowledge, attitudes and behavioural practices in each topic module. The objective was to use a comparative analysis to determine which concepts and messages within each theme are influencing a positive change among project beneficiaries.*

### IV. Methodology

Each topic within the Nutrition theme was carefully reviewed to identify key areas where the project seeks to positively change knowledge, attitudes and practices among men and women beneficiaries. This was used to develop indicators to measure behavioural change over the course of each topic module. The body of research from similar contexts and documentation from the project site shows that men are generally the main decision-makers in the household, and often influence the behaviour of other household members, therefore it was imperative to separately consider assessing men and women when developing the indicators and questionnaires for each topic module. Therefore, the indicators target three groups: men and women caregivers together, women caregivers only and men caregivers only.

Social and behaviour change can be negatively influenced by external factors. To account for these externalities, at the individual level, behaviour change can be measured not only through behavioural outcomes but also through the desire or plan to change. This can be evaluated through psychosocial domains: knowledge, intention, self-efficacy (confidence), attitude, subjective norms and perceived behavioural control (see Table 1).

Table 1: Psychosocial domains for measuring behavioural change<sup>4</sup>

Domains	Descriptions (Adopted from NCI, 2005)	Domains	Descriptions (Adopted from NCI, 2005)
<b>Knowledge</b>	Facts, information, and skills necessary to perform a behaviour	<b>Attitude</b>	Perceived evaluation and / or enthusiasm toward the behaviour
<b>Intention</b>	Perceived likelihood of performing a behaviour	<b>Subjective norm</b>	Perception about whether key people approve or disapprove of the behaviour
<b>Self-efficacy</b>	Confidence in one's ability to take action and successfully carry out the behaviour	<b>Perceived behavioural control</b>	Belief that one has, and can successfully exercise, control over performing the behaviour

For the GTNS context, the appropriate psychosocial indicators for this pre-/post-testing exercise were knowledge, intention and confidence. Within the pre-post questionnaires, the psychosocial indicators mentioned below were combined with questions on self-reported behaviour to give a more holistic picture of the potential behaviour change impact pathway, as well as to shed light on behavioural outcomes.

For each indicator, objectives based on SMART criteria<sup>5</sup> were developed to measure against the comparative analysis of the pre- and post-tests. The SMART objectives were agreed through discussion with the programme team based on context, expertise and secondary data sources. A matrix was created to consolidate this information per topic, to guide the M&E team in producing short questionnaires on WFP's corporate data collection tool (Open Data Kit – ODK) (see Annex 1 for Maternal Nutrition topic matrix). The indicators and SMART Objectives for all Nutrition topic modules were developed before the implementation of the first SBCC topic module, Infant and Young Child Feeding (IYCF). After completing the comparative analyses for the first three topic modules (Infant and Young Child Feeding, Malaria Prevention and Gender Dialogue Clubs), the SMART Objectives for the remaining two Nutrition topics were updated: Maternal Nutrition and Sanitation and Hygiene topics. Based on the previously completed three comparative analyses, it was found that community members were scoring higher than the SMART Objectives set and it was recommended to increase the SMART Objectives of some of the indicators to better reflect this reality. Of the 18 indicators across the Maternal Nutrition and Sanitation and Hygiene topics, 8 SMART Objectives were increased after careful review by the project M&E and programme focal points (see Annex 1 for Maternal Nutrition topic updates).

<sup>4</sup> WFP. (2019, January). *Social and Behaviour Change Communication (SBCC) Guidance Manual for WFP Nutrition*. Chapter 8: Monitoring Phase [partially adapted]. Originally titled "Table 15. SBCC-related psychosocial indicators".

<sup>5</sup> Specific, Measurable, Achievable, Relevant, and Timebound



The questionnaire was used both during the pre-test and post-test to assess the change in results after a beneficiary completed the module (See Annex 2).<sup>6</sup> The Maternal Nutrition pre- and post-test focused on four main areas for desired behaviour change:

- recalling key maternal nutrition messages
- understanding how a mother's health impacts the first 1,000 days of life
- a mother's health and diet during pregnancy and lactation
- men's role in maternal nutrition

In total, there were eight indicators covering these areas that translate into eight questions on the questionnaire.

The interviews were conducted in the local language of Sena which required field staff to be confident with the questionnaire to easily translate between Portuguese and Sena. WFP trained the implementing partner, Pathfinder International, to conduct the data collection. The questions were pre-tested to ensure translation was accurate and questions were understood by community members.

For the Maternal Nutrition topic, the target sample for both the pre- and post-test was 120 project beneficiaries (60 women and 60 men) across Mulima locality in Chemba District, Sofala. The sample size was calculated based on the feasibility to collect these results, taking into consideration the elements of limited resources and timing. The results are to provide indications as to how the response of the SBCC-indicators may be impacted by targeted community members before and after SBCC topic module sessions. The results inform the project's overall SBCC programming and field implementation. The methodology does not serve to inform other SBCC interventions and is specific for the GTNS project in Chemba.

The survey was conducted through individual interviews with men and women separately, using convenience sampling<sup>7</sup> during community visits. Data was collected immediately before the first of six Maternal Nutrition sessions for the pre-test (in May 2021) and immediately after the sixth session for the post-test (in June 2021). The target sample is not necessarily the same individuals across pre- and post-testing as the methodology does not require tracking the same community members.

For the Maternal Nutrition pre-test, 121 project beneficiaries (59 men and 61 women) were surveyed across 30 communities. For the post-test, 120 project beneficiaries (60 men and 60 women) were surveyed across 15 communities. Across the pre- and post-testing, 39 out of 49 communities<sup>8</sup> were included in the exercise.

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<sup>6</sup> In the questionnaire, men and women were also asked a question that is related to the parallel cooking demonstration activity that occurs once in each topic module (question 3.1 in Annex 2). This data is analysed and reported separate from this comparative analysis report (see forthcoming GTNS Tableau dashboard).

<sup>7</sup> Convenience sampling method is selecting respondents who are easily accessible (<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5606225/>). For Malaria Prevention pre- and post-test data collection, enumerators surveyed eligible, accessible beneficiaries who had consented to being interviewed.

<sup>8</sup> Andrassone, Arnelo, Bangwe, Bucha, Candima, Castela, Dzunga 1, Dzunga 2, Fernando, Francalino, Fumbe 1, Fumbe 2, Macendua, Mapata, Mateus, Melo 1, Muandinhoza, Mulima-sede, Nhacavunvu, Nhamaliwa, Nhamazonde, Nhambhandha,

While not a completely accurate representation of the population, this analysis will provide insight into programme implementation within the catchment area.

## V. Results

The pre- and post-test questionnaire consisted of nine questions. Three of these questions targeted females, three questions targeted males, and five questions targeted both females and males in the household. Note that this gender comparison does not include individuals who are intersex or transgender. Overall, all eight indicators were reached based on the SMART objectives developed for the Maternal Nutrition topic (see Table 2). When looking at the average of men and women caregivers, six of the indicators already reached the SMART objective during the pre-test (1.2, 1.3, 1.4, 1.5, 1.6 and 1.8). Looking at women caregivers only, one additional indicator (1.7) reached the SMART objective during the pre-test. The SMART objective for the remaining indicator (1.1) was nearly reached in the pre-test, missing by three percentage points.

Table 2: Pre- and Post-test Results (in percentages)

#	Indicator Detail	SMART Objective	Pre-test Result (%)			Post-test Result (%)		
			Men	Women	Avg	Men	Women	Avg
1.1	Increased percentage of MN messages recalled by caregivers	After complete SBCC topic area is conducted [6 weeks], <u>75% of caregivers</u> partaking in the SBCC sessions, will be able to recall 3 key MN messages	73	75	74	95 (+22)	95 (+20)	95 (+21)
1.2	Increased percentage of caregivers have knowledge about how the mothers health (diet, check-up's) affects the child's cognitive development during the first 1000 days	After complete SBCC topic area is conducted [6 weeks], <u>75% of caregivers</u> partaking in the SBCC sessions, will know how the mother's health affects the child's cognitive development during the first 1000 days	80	77	78	92 (+12)	97 (+20)	95 (+17)
1.3	Increased percentage of caregivers who intend to go to regular health screenings during pregnancy	After complete SBCC topic area is conducted [6 weeks], <u>75% of women</u> partaking in the SBCC sessions, intend they will go for regular health screenings during pregnancy	-	69	-	-	90 (+21)	-

Nhancaca, Nhangue, Nharugue, Nhasulu, Nhatsete, Ofece, Shonsua, Tomucene 1, Tomucene 2, Xavier, Zenguerere, Zomdane 1

1.4	Increased percentage men confident they will accompany their wives to go to regular health screenings during pregnancy	After complete SBCC topic area is conducted [6 weeks], <u>66% of men</u> partaking in the SBCC sessions, are confident they will accompany their wives to go to regular health screening during pregnancy	46	-	-	80 (+34)	-	-
1.5	Increased percentage of women intending to consume a balanced and diverse diet when pregnant and lactating	After complete SBCC topic area is conducted [6 weeks], <u>66% of women</u> partaking in the SBCC sessions, intend to consume a balanced and diverse diet when pregnant and lactating	-	57	-	-	93 (+36)	-
1.6	Increased percentage of men intending to encourage their wife to consume a balanced and diverse diet when pregnant and lactating	After complete SBCC topic area is conducted [6 weeks], <u>66% of men</u> partaking in the SBCC sessions, intend to encourage a balanced and diverse diet for their wife pregnancy and lactation period	49	-	-	88 (+39)	-	-
1.7	Increased percentage women confident they will consume IFA tablets regularly	After complete SBCC topic area is conducted [6 weeks], <u>66% of women</u> partaking in the SBCC sessions, are confident they will consume their IFA tablets regularly	-	56	-	-	85 (+29)	-
1.8	Increased percentage of men who know how to support their wife during pregnancy	After complete SBCC topic area is conducted [6 weeks], <u>50% of men</u> partaking in the SBCC sessions, can recall at least three different ways on how to support their wife during pregnancy	63	-	-	88 (+25)	-	-

Note: Values in the parentheses indicate the percentage point change, comparing values from the pre- and post-test results

The results will be presented in four categories: recalling key maternal nutrition messages, understanding how a mother's health impacts the first 1,000 days of life, a mother's health and diet during pregnancy and lactation and men's role in maternal nutrition.

## Recalling key maternal nutrition messages

Findings indicate that both men and women caregivers demonstrated an increase of knowledge around maternal nutrition-related messages discussed in the Maternal Nutrition sessions. On average, the pre-test results just nearly reached the SMART objective of 75% of caregivers, with 74% of caregivers recalling at least three key maternal nutrition-related messages (see Figure 3), though women on their own met the SMART objective during the pre-test (75%). By the post-test, all caregivers surveyed were able to recall at least three key messages regarding maternal nutrition, with an average increase of 21 percentage points. (see Figure 3).

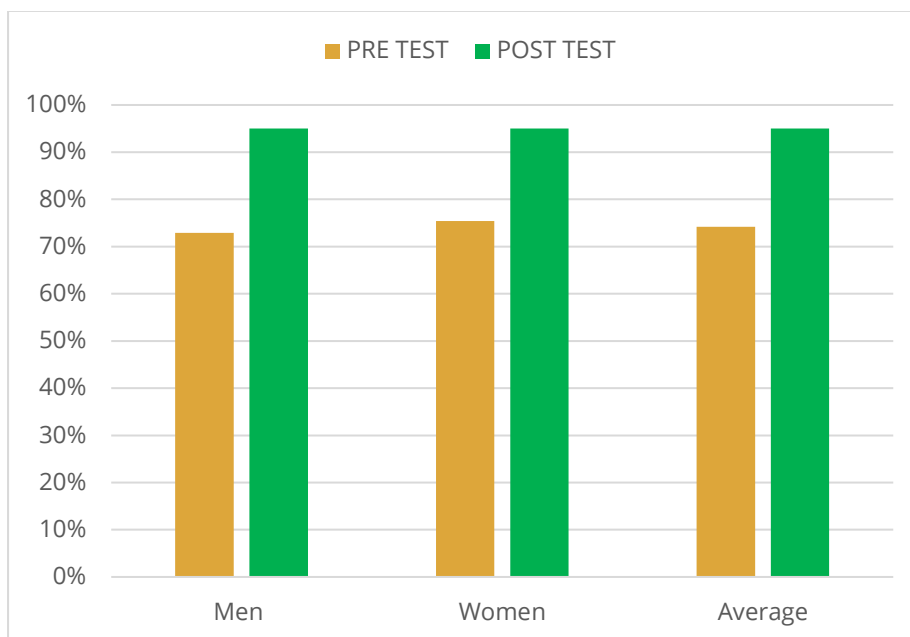


Figure 3: Percentage of caregivers who knew at least three key messages related to maternal nutrition

The top three key messages recalled in the pre-test were that it is important to go to health clinics to give birth with a skilled birth attendant (53% of caregivers); that regular check-ups/health screenings are crucial during pregnancy and when lactating (38% of caregivers) and that it is important to consume a diverse diet during pregnancy and when lactating (37% of caregivers).

The top three messages recalled in the post-test were that it is important to consume a diverse diet during pregnancy and when lactating (66% of caregivers, a 29% increase); that it is important to go to health clinics to give birth with a skilled birth attendant (56% of caregivers, a 3% increase) and that regular check-ups/health screenings are crucial during pregnancy and when lactating (55% of caregivers, an 18% increase).

The key message that had the largest percent increase in recall from the pre-test to post-test (by 29 percentage points) was knowing that it is important to consume a diverse diet during pregnancy and when lactating (see Annex 2, question 4.7 for a full list of key messages).

## Understanding how a mother’s health impacts the first 1,000 days of life

While it is generally understood that the health of a foetus is impacted by the diet and overall health of its carrier, some beneficiaries were unaware of the connection between the health of the baby and mother during the first two years, or 1,000 days, of life.

In the pre-test results, all caregivers surpassed the SMART objective of 75% of caregivers knowing how the mother's health affects the child's cognitive development during the first 1000 days (78% of caregivers; 77% of women and 80% of men) (see Figure 4). In the post-test, all caregivers were again able to surpass the SMART objective of at least 75% knowledge retention on the topic (95% of caregivers; 97% of women and 92% of men) (see Figure 4).

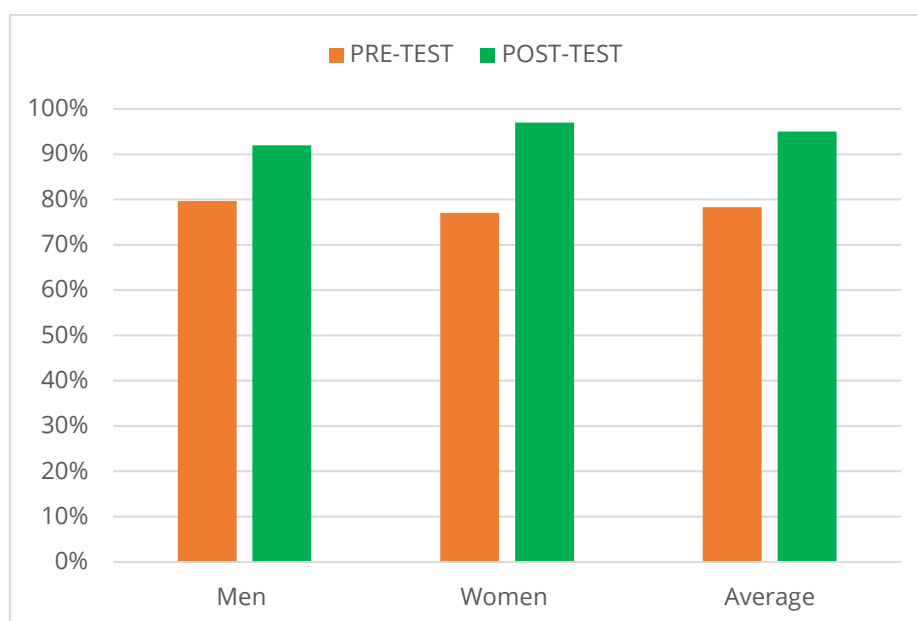


Figure 3: Percentage of caregivers who knew how the mother's health affects the child's cognitive development

## A mother’s health and diet during pregnancy and lactation

Pregnant people require a greater intake of micro and macronutrients than they did prior to pregnancy. A nutrient-dense diet is strongly emphasized to meet the additional needs of the growing baby and protect the health of the pregnant person. Additionally, rest and decreased physical labour are crucial protective measures during pregnancy and lactation<sup>9</sup>. However, pre and post test data demonstrated an initial lack of awareness among some respondents, followed by subsequent learning and retention of this information.

The SMART objective set for this indicator was that 66% of women would have the intention to eat diverse, balanced meals during their pregnancies and lactation period. When asked about their intention to do so, 57% of women who took the pre-test indicated that they intended to do so (see Figure 5), and 41% responded with “maybe”. In the post-test, 93% of women indicated they intended to eat balanced, diverse diets during

<sup>9</sup> Callahan, A., Leonard, H. and Powell, T., 2021. *Nutrition in Pregnancy and Lactation*. [online] [Openoregon.pressbooks.pub](https://openoregon.pressbooks.pub).

pregnancy, while only 7% responded with “maybe”, demonstrating a 36% increase and 34% decrease respectively (see Figure 5).

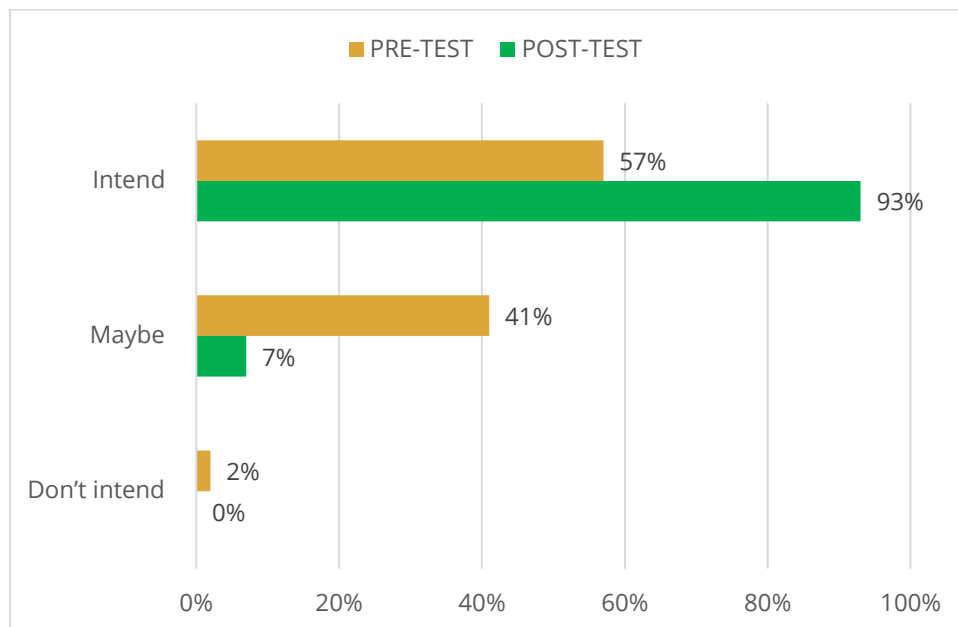


Figure 5: Percentage of women intending to eat balanced, diverse diets during pregnancy and lactation

When pregnant, it is important to regularly attend health screenings. At least four such visits should occur during a pregnancy. Additionally, it is important to give birth in a health facility, with a skilled birth attendant when such resources are available. This survey measured the degree to which women understood the importance of attending health screenings and giving birth in health centers.

The SMART objective set for this indicator was that 75% of women would have the intention to attend regular health screenings during their pregnancies. When asked about their intention to do so, 69% of women who took the pre-test indicated that they intended to do so (see Figure 6), and 31% responded with “maybe”. In the post-test, 90% of women indicated they intended to regularly attend health screenings during pregnancy, while 10% responded with “maybe”, demonstrating a 31% increase and 21% decrease respectively (see Figure 6).

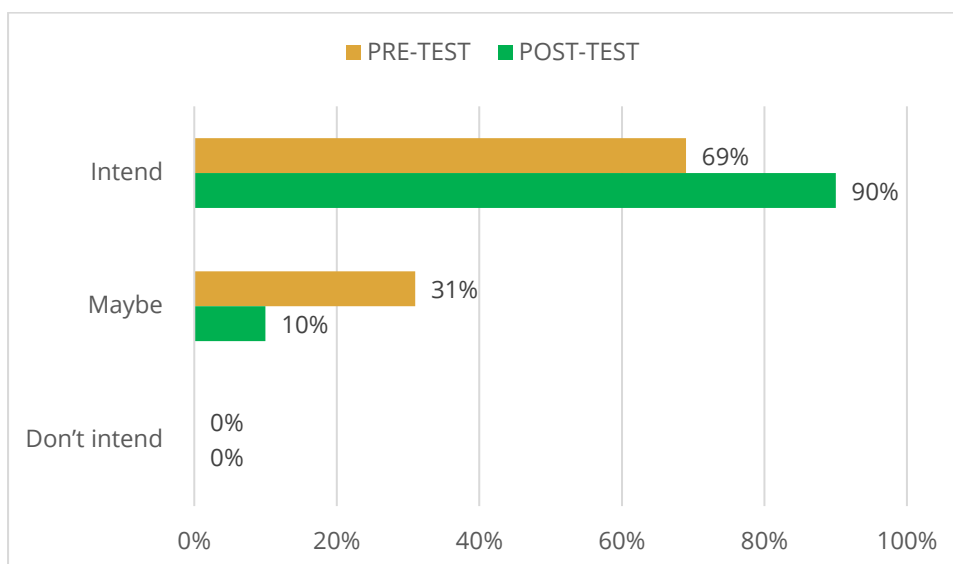


Figure 6: Percentage of women intending to regularly attend health screenings during pregnancy

Another crucial element during pregnancy is the maintenance of health iron and folate levels. In regions where anaemia is high and access to foods containing iron and folate are low, such as central Mozambique, the use of iron-folate acid (IFA) tablets have proved to be useful in countering the ill-effects of anaemic and poor access to iron and folate rich foods<sup>10</sup>.

Women were surveyed about their level of confidence in taking their IFA tablets regularly. In the pre-test, 56% of respondents were fully confident that they would regularly take their tablets, while 43% were somewhat confident and 2% were not confident (see Figure 7). In the post test, there was a 29% increase in full confidence (to 85%) and a 29% decrease in respondents who were somewhat confident (to 15%). There were not any respondents who indicated that they were not confident in the post test (see Figure 7).

<sup>10</sup> Tusa, B., Weldesenbet, A., Bahiru, N. and Enyew, D., 2021. *Magnitudes of Anemia and Its Determinant Factors Among Lactating Mothers in East African Countries: Using the Generalized Mixed-Effect Model*. [online] NCBI.

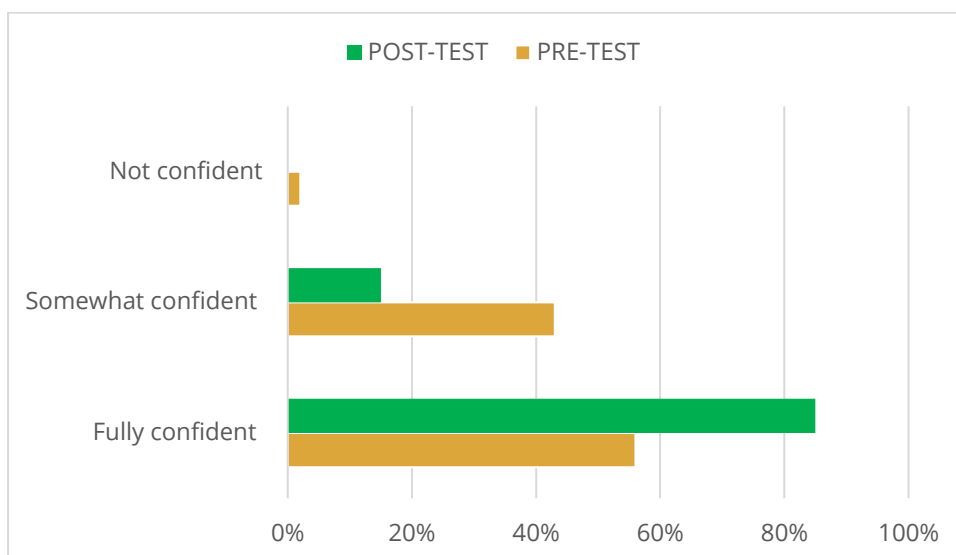


Figure 7: Percentage of women confident that they will regularly take IFA tablets

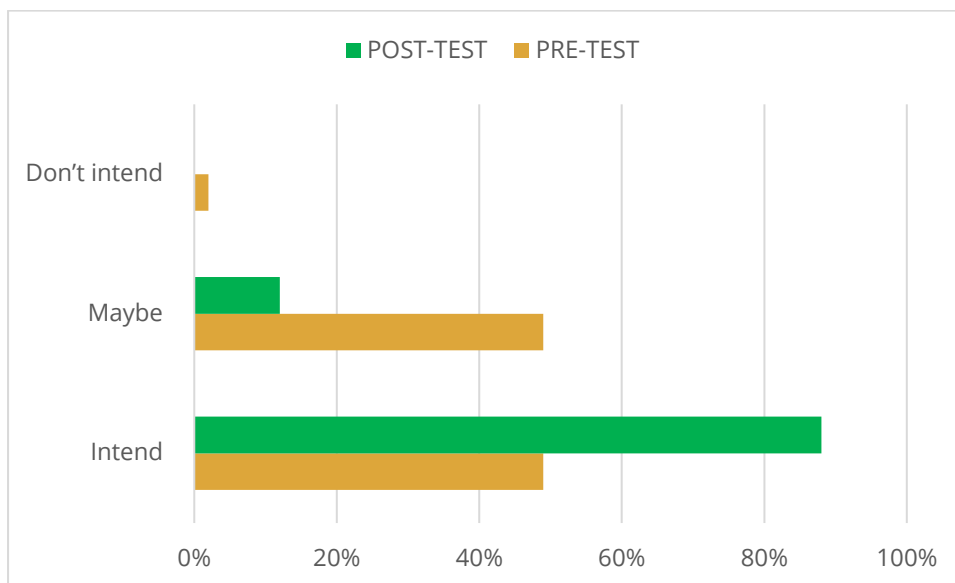
### Men’s role in maternal nutrition

Our Knowledge, Attitude and Practices (KAP) study demonstrates that men play a big role in the health seeking behaviours of women.<sup>11</sup> They are often the influential members of a community in this province, and they exercise a great deal of authority over a woman’s food choices and access to nutritive food. As such, men were asked about their confidence in attending health screenings with their pregnant wives and about their intention to encourage on their wives to eat balanced, diverse diets during pregnancy and lactation.

Respondents in the pre-test did not meet the SMART objective goal of 66% of men encouraging their wives to consume a balanced and diverse diet during pregnancy and lactation. In the pre-test, 49% of men indicated the intention to encourage their wives to eat balanced, diverse diets during pregnancy and lactation, while 49% indicated that they might encourage their wives in this manner, and 2% indicated that they would not encourage their wives in this manner (see Figure 8). However, the SMART objective goal was met in the post-test, with results demonstrating a 39% increase in intention to support and a 37% decrease in respondents who answered maybe. There were not any respondents who answered “no” in the post-test (see Figure 8).

<sup>11</sup>WFP. (2021). *Knowledge, Attitudes and Practices (KAP) study on maternal nutrition, infant and young child feeding, sanitation and hygiene and sexual and reproductive health, including obstetric fistula, in Chemba District, Sofala*. Maputo: WFP.





*Figure 8: Percentage of men intending to support their wives in eating balanced, diverse diets during pregnancy and lactation*

With regard to attending health screenings, our KAP study demonstrated when men do not accompany their wives to health screenings, women consider this an obstacle to complying with health centre recommendations concerning the care they need during pregnancy. This is because their husbands do not directly hear from the health centre professionals what kind of care the women need at home, and thus are less likely to accept their requests for support.

In the pre-test, 46% of respondents (all male) were fully confident that they would accompany their wives to health screenings, 44% were somewhat confident, and 10% were not confident (see Figure 9). None of the respondents met the SMART goal for this topic, which was set at 66% full confidence. The post test results reflected a positive impact toward the SMART goal, with 80% of respondents reporting full confidence (a 34% increase) and 20% responding as “somewhat confidence” (a 24% decrease) (see Figure 9).

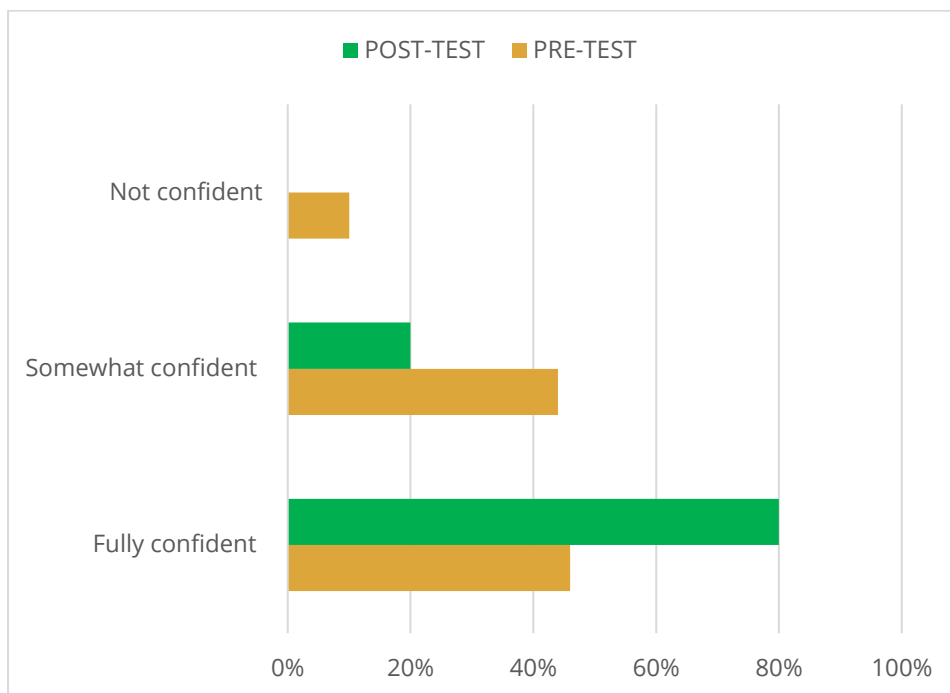


Figure 9: Percentage of men confident that they will accompany their wife/wives to go to regular health screenings during pregnancy

## VI. Discussion

While project beneficiaries displayed existing knowledge, positive attitudes and good practices regarding maternal nutrition in pre-test results, the post-test results suggest that the topic module sessions had a strong positive impact on knowledge and intention amongst caregivers in all areas: recall of key messages; understanding how a mother’s health impacts the first 1,000 days of life; a mother’s health and diet during pregnancy and lactation; and men’s role in maternal nutrition.

Like the IYCF and Malaria Prevention topic modules, post-test results exceeded all SMART objectives. Two of the indicators reached their SMART objectives in the pre-test ( knowing how mother’s health affects child’s development in the first two years of life and intending to regularly attend health screenings during pregnancy).

One additional indicator reached the SMART objective in the pre-test when disaggregated by gender (women’s ability to recall key maternal nutrition messages) and both men and women surpassed this SMART objective in the post-test. The other four indicators did not reach their pertinent SMART objectives in the pre-test but exceeded them in the post-test. These were: men’s confidence in accompanying their wives to attend regular health screenings during pregnancy; women intending to consume a balanced and diverse diet when pregnant and lactating; women; men intending to encourage their wife/wives to consume a balanced and diverse diet when pregnant and lactating; increased percent of women confident that they will regularly consume IFA tablets; and increased percentage of men knowing how to support their wives during pregnancy. As demonstrated in the data, none of the eight indicators resulted in 100% reach of their respective SMART objective in the post-test.



Men and women caregivers significantly increased their knowledge around key messages related to maternal nutrition from the topic module sessions. Some key recall messages that were barely mentioned by caregivers in the pre-test, such as the need for lactating women to take 1 IFA tablet per day for the first three months after birth, were recalled by significantly more caregivers in the post-test (from 3 to 31 respondents). These findings show that the Maternal Nutrition sessions were successful in teaching, and in certain cases reminding, caregivers of the key messages regarding understanding and promoting maternal nutrition.

In Mozambique there is a strong correlation between malnutrition, high maternal and infant mortality rate as well as stunting of children under five years old. Lack of access to adequate food, coupled with a high incidence of infectious diseases and limited access to primary health care services for most of the population continue to result in high prevalence of undernutrition and micronutrient deficiencies. Additionally, Mozambique has the highest prevalence of reported anemia among lactating mothers, particularly in the center of the country, where our beneficiaries reside. This is exacerbated by the unavailability of food sources as well as a lack of knowledge concerning the need for comprehensive diets and financial restrictions which limit caregivers from obtaining nutritive, diverse foods.

One's nutrient needs increase during pregnancy and lactation. Some of the increased nutrient requirements protect maternal health while others affect birth outcome and infant health. Pre and post-test results showed that caregivers were able to recall more of the less common key maternal nutrition messages after six weeks of participating in the topic module, such as the importance of consuming iron rich foods or iron supplements (especially for the prevention of anemia), the need for pregnant to receive support from their husbands and elders in the community, and the special needs of pregnant women living with HIV/AIDS.

Pregnant women must attend health screenings at a health center or clinic at least four times during their pregnancy and should aim to give birth at a health clinic with the presence of a skilled birth attendant when possible. Based on this pre- and post-test comparative analysis, most caregivers were aware of these facts before the module. However other key messages were known by very few respondents prior to the module. This included the need for lactating mothers to take IFA tablets for three months after birth and the importance of experienced mother's providing support to expectant mothers. In both cases only three percent of respondents were aware of this fact, which then changed to 26% and 19% respectively.

Over the course of the Maternal Nutrition module, men caregivers recalled more ways to support their pregnant and lactating wife/wives, including by helping her walk around for exercise, prioritizing her and CU2 if there is limited space under the mosquito net, and providing psychological support. Meanwhile, women showed the greatest improvement in understanding the need to eat a balanced and diverse diet and attending health screenings. Understanding the nutritional and health needs of PLW and prioritizing PLW and young children in nutrition promotion methods will lead to better family nutrition and overall health.

When comparing pre- and post-test results of men and women, the gender gap between knowledge, attitudes and practices was significantly reduced in the post-test results, leading to a diminished range of scores. Nutrition sessions are a vehicle for change, providing safe spaces for household members to discuss and reflect on relevant topics with a trained community-based facilitator. The findings in this comparative analysis illustrate the potential of Maternal Nutrition sessions to support in lessening the gap between men and women in knowledge on, positive attitudes towards and good practices toward promoting maternal nutrition.

## VII. Conclusion

Project beneficiaries in Chemba District poses prior knowledge of the nutritional needs of pregnant women prior to our intervention. Pre-test results reflect this wisdom whereby there exists a decent amount of knowledge, favourable attitudes and good practices around maternal nutrition and its promotion. Nevertheless, findings have demonstrated a clear positive influence across all of the eight indicators when comparing pre and post-test results for Maternal Nutrition, particularly in understanding the importance of consuming a balanced, diverse diet during pregnancy and lactation.

It is recommended that the GTNS M&E team revisit the topic module Indicator and SMART Objectives Matrix and consider re-evaluating certain SMART objectives for the remaining topics under the Nutrition theme (Sanitation and Hygiene). Additionally, it is suggested that any future development of SMART objectives factor in the strong performance from project beneficiaries across knowledge, attitudes and practices in the two prior Nutrition sessions implemented (IYCF and Malaria Prevention) and findings from the KAP study.

Routine monitoring of SBCC by assessing psychosocial and behavioural indicators, such as this pre-and post-test comparative analysis, provide information that can support field implementation by revealing necessary adaptations to better reach programme objectives, and to increase nutrition and health outcomes. Notwithstanding positive findings from the pre- and post-test analysis, revisiting maternal nutrition concepts, such as regularly attending health screenings and regularly taking IFA tablets, and incorporating them into any forthcoming refresher trainings would be useful for sustaining behaviour change among community members in Chemba.

## Acronyms



ADA	Austrian Development Agency
CU2	Children Under 2 (years)
CU5	Children Under 5 (years)
GTNS	Gender Transformative and Nutrition-sensitive (project)
GDC	Gender Dialogue Club
IFA	Iron & Folic Acid (tablet)
IYCF	Infant and Young Child Feeding
KAP	Knowledge, Attitude and Practices (Study)
MUAC	Mid-Upper Arm Circumference
ODK	Open Data Kit
PLW	Pregnant and Lactating Women
SBCC	Social and Behaviour Change Communication
SDSMAS	District Services of Health, Women & Social Action
SMART	Specific, Measurable, Achievable, Relevant and Timebound
SRH	Sexual and Reproductive Health
S&H	Sanitation & Hygiene
WFP	United Nations World Food Programme

## Annex 1: Maternal Nutrition Indicators and SMART Objectives

#	Indicator detail	SMART Objective [Updated]	Original SMART Objective	Respondent	Behavioural domain	Psychosocial indicators	Reference (template question)
<b>1. Nutrition – Maternal Nutrition</b>							
1.1	Increased percentage of MN messages recalled by caregivers	After complete SBCC topic area is conducted [6 weeks], 75% of caregivers partaking in the SBCC sessions, will be able to recall 3 key MN messages	No change	WOMAN/MAN	MN (GENERAL)	KNOWLEDGE	4.1
1.2	Increased percentage of caregivers have knowledge about how the mothers health (diet, check-up's) affects the child's cognitive development during the first 1000 days	After complete SBCC topic area is conducted [6 weeks], 75% of caregivers partaking in the SBCC sessions, will know how the mother's health affects the child's cognitive development during the first 1000 days	No change	WOMAN/MAN	MN (GENERAL)	KNOWLEDGE	4.2
1.3	Increased percentage of caregivers who intend to go to regular health screenings during pregnancy	After complete SBCC topic area is conducted [6 weeks], 75% of caregivers partaking in the SBCC sessions, intend they will go for regular health screenings during pregnancy	66%	WOMAN	HEALTH SCREENING	INTENTION	2.1
1.4	Increased percentage men confident they will accompany their wives to go to regular health screenings during pregnancy	After complete SBCC topic area is conducted [6 weeks], 66% of men partaking in the SBCC sessions, are confident they will accompany their wives to go to regular health screening during pregnancy	50%	MAN	HEALTH SCREENING	CONFIDENCE	3.1
1.5	Increased percentage of women intending to consume a balanced and diverse diet when pregnant and lactating	After complete SBCC topic area is conducted [6 weeks], 66% of women partaking in the SBCC sessions, intend to consume a balanced and diverse diet when pregnant and lactating	33%	WOMAN	DIVERSE DIET	INTENTION	2.2
1.6	Increased percentage of men intending to encourage their wife to consume a balanced and diverse diet when pregnant and lactating	After complete SBCC topic area is conducted [6 weeks], 66% of men partaking in the SBCC sessions, intend to encourage a balanced and diverse diet for their wife pregnancy and lactation period	33%	MAN	DIVERSE DIET	INTENTION	3.2

1.7	Increased percentage women confident they will consume IFA tablets regularly	After complete SBCC topic area is conducted [6 weeks], 66% of women partaking in the SBCC sessions, are confident they will consume their IFA tablets regularly	50%	WOMAN	IFA TABLETS	CONFIDENCE	2.3
1.8	Increased percentage of men who know how to support their wife during pregnancy	After complete SBCC topic area is conducted [6 weeks], 50% of men partaking in the SBCC sessions, can recall at least three different ways on how to support their wife during pregnancy	No change	MAN	FATHER SUPPORT	KNOWLEDGE	3.3

## Annex 2: Maternal Nutrition Questionnaire

	<p><b>SBC Monitoring Questionnaire – Maternal Nutrition</b></p> <p>To be filled in by: <b>Beneficiaries - Interviewed by Pathfinder Staff</b></p> <p><b>Version 2 - August 2020</b></p>	<p><b>Moçambique</b></p> <p><b>GTNS Project</b></p> 
<p><b>Introduction</b></p>		
<p><b>Read introduction to beneficiary</b></p> <p>Hello, My name is _____. I work for the local organization Pathfinder, supporting the Ministry of Health and WFP. You have been selected by chance within the GTNS (Khaliro Adidi) project beneficiaries at this site for this interview. You will gain no material benefit from agreeing to conduct this interview. You will not receive any extra assistance than you would otherwise have received. The survey is voluntary and you can choose not to take part.</p> <p>The purpose of this interview is to obtain information about the health behaviours of community members. It helps us understand whether we are implementing our program properly and whether we are addressing the needs of the population we serve. The information that you give will be confidential. The information will be used to prepare reports, but all information will be confidentially and no names will be shared.</p> <p>This interview will only take about 20 minutes.</p> <p>Please provide the most accurate answer that you can to best inform and improve the program.</p> <p>If you agree, we will now start the questions.</p> <p><b>If respondent says 'Yes' – start the data collection. If respondent says 'No' – thank you for his/her time and end the interview.</b></p>		
<p><b>1. General information - INTERVIEWER TO FILL IN</b></p>		
<p>1.1 . Name of community [drop down list]: <b>Andrassone, Arnelo, Bangwe, Bhaumbha, Bucha, Candima, Cassume, Castela, Deve, Dzunga 1, Dzunga 2, Fernando, Francalino, Fumbe 1, Fumbe 2, Macendua, Mandue, Mapata, Mateus, Melo 1, Melo 2, Muandinhoza, Mulima-sede, Nhacagulagua 1, Nhacagulagua 2, Nhacavunvu, Nhalunga, Nhamaliwa, Nhamazonde, Nhambhandha, Nhamingale, Nhancaca, Nhangué, Nhapwete, Nharugue, Nhasulu, Nhatsete, Nhakuiyoyo, Niquice, Ofece, Shonsua, Thenda, Tomucene 1, Tomucene 2, Tsera, Xavier, Zenguerere, Zomdane 1, Zomdane 2</b></p>		
<p>1.2. Beneficiary is a <input type="checkbox"/> Man <input type="checkbox"/> Woman</p> <p>[ALL RESPONDENTS SHOULD RESPOND TO ALL QUESTIONS]</p>	<p>1.3. Date    _ / _ / ____</p> <p>                  dd mm yyyy</p>	
<p><b>2. Questions for women</b></p>		
<p>2.1</p>	<p>On a scale of 1 to 3 – with 1 being 'do not intend to' 2 'maybe will do so' and 3 being 'intend to' – to what extent do you intend to attend the regular health screenings during pregnancy? You can only choose one option.</p>	<p><b>Read options to beneficiary</b></p> <p><input type="checkbox"/> 1 - Do not intend to                      <input type="checkbox"/> 2 - Maybe will                      <input type="checkbox"/> 3 - Do intend to</p>



2.2	On a scale of 1 to 3 – with 1 being 'do not intend to' 2 'maybe will do so' and 3 being 'intend to' – to what extent do you intend to eat diverse and balanced meals when you are pregnant and lactating? You can only choose one option.	<b>Read options to beneficiary</b> <input type="checkbox"/> 1 - Do not intend to <input type="checkbox"/> 2 - Maybe will <input type="checkbox"/> 3 - Do intend to
2.3	On a scale of 1 to 3 – with 1 being 'do not intend to', 2 'maybe will do so' and 3 being 'intend to' – to what extent do you intend to seek health care if you suspect a family member has malaria, especially pregnant and lactating women and children? You can only choose one option.	<b>Read options to beneficiary</b> <input type="checkbox"/> 1 - Do not intend to <input type="checkbox"/> 2 - Maybe will <input type="checkbox"/> 3 - Do intend to
<b>3. Questions for men</b>		
3.4	On a scale of 1 to 3 – with 1 being 'not confident' 2 being 'somewhat confident', and 3 being 'fully confident', to what extent do you feel confident that you will accompany your wife/wives to go to regular health screening during pregnancy? You can only choose one option.	<b>Read options to beneficiary</b> <input type="checkbox"/> 1 - Not confident <input type="checkbox"/> 2 - Somewhat confident <input type="checkbox"/> 3 - Fully confident
3.5	On a scale of 1 to 3 – with 1 being 'do not intend to' 2 'maybe will do so' and 3 being 'intend to' – to what extent do you intend to support your wife/wives to eat diverse and balanced meals when she is/they are pregnant and lactating? You can only choose one option.	<b>Read options to beneficiary</b> <input type="checkbox"/> 1 - Do not intend to <input type="checkbox"/> 2 - Maybe will <input type="checkbox"/> 3 - Do intend to
3.6	How can you support your wife/wives during pregnancy?	<b><u>Do not read options to beneficiary. Mark each option that the caregiver mentions.</u></b> <ul style="list-style-type: none"> <li>▪ I can support my wife/wives with moral support</li> <li>▪ I can support my wife/wives with psychological support</li> <li>▪ I can support my wife/wives with a healthy environment.</li> <li>▪ I should accompany my wife/wives to the health facility for regular health screenings</li> <li>▪ I can support my wife/wives by spending time with my family.</li> <li>▪ I can support my wife/wives by helping her walk around for exercise.</li> <li>▪ I can support my wife/wives by carrying items.</li> <li>▪ I can support my wife/wives by sleeping under the mosquito net and not getting infected with malaria.</li> <li>▪ I can support my wife/wives by prioritizing her and the children under 2 if there is not enough space for the whole family to sleep under the mosquito net.</li> <li>▪ I can support my wife/wives by being involved in child feeding and food preparation.</li> <li>▪ Other; please specify _____</li> </ul>

**4. Questions for men and women**

4.7	Can you please recall key messages about maternal nutrition and health?	<p><b><i>Do not read options to beneficiary. Mark each option that the caregiver mentions.</i></b></p> <ul style="list-style-type: none"> <li>▪ It is important to consume a diverse diet during pregnancy and when lactating</li> <li>▪ Iron-rich foods are very good for the woman's health to consume during pregnancy and when lactating</li> <li>▪ Regular check-ups / health screenings are crucial during pregnancy and when lactating</li> <li>▪ Husbands/fathers should accompany wives for the regular check-ups / health screenings during pregnancy and when lactating</li> <li>▪ Iron-folic acid helps women avoid anemia</li> <li>▪ You get iron folic acid (IFA) pills from the health clinic</li> <li>▪ Pregnant women should take 1 iron/folic acid pill per day</li> <li>▪ Lactating women should take 1 iron/folic acid pill per day for the first three months after birth</li> <li>▪ Women should go to the health clinic for check-ups at least 4 times during pregnancy</li> <li>▪ Go to health clinics to give birth with a skilled birth attendant</li> <li>▪ Go to the health clinic as soon as you know you are pregnant</li> <li>▪ Pregnant women should not drink or smoke.</li> <li>▪ Pregnant women should rest a lot</li> <li>▪ Pregnant women should not lift heavy items.</li> <li>▪ Pregnant women who are living with HIV/AIDS should take pills to protect their baby.</li> <li>▪ Pregnant women should receive the Tetanus vaccine to protect their baby during birth.</li> <li>▪ Pregnant women should practice good hygiene.</li> <li>▪ Husband/fathers should support pregnant mothers and be involved parents from conception.</li> <li>▪ Experienced mothers should support pregnant women in the family and in the community.</li> <li>▪ Pregnant women should eat at least three diverse and balanced meals a day.</li> <li>▪ Pregnant women should eat foods from the "base" group (cereals and tubers), the "constructores" group (animal and plant protein), the "protectores" group (fruits and vegetables), and the "energeticos" group (fats).</li> <li>▪ Pregnant women should eat 1-2 snacks per day.</li> <li>▪ Good nutrition during pregnancy and the child's first two years of life are essential for good health into adulthood.</li> <li>▪ Other; please specify _____</li> </ul>
4.8	A mother's health has no effect on the baby during pregnancy and for the first two years of life - True or False?	<div style="display: flex; justify-content: space-around;"> <span><input type="checkbox"/> 1 - True</span> <span><input type="checkbox"/> 2 - False</span> </div>

**5. Cooking Demonstrations**

5.1	<b>[If applicable]</b> , did you try to make the recipe(s) from the cooking demonstration at your home anytime over the last 6 weeks?	<input type="checkbox"/> 0 - Not applicable <input type="checkbox"/> 1 - Yes, I tried to make the recipe(s) at home <input type="checkbox"/> 2 - No, I did not try to make the recipe(s) at home
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**6. Do you have anything you want to ask about what we discussed now?**

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**Final remarks**

***Read conclusion to beneficiary***  
This was the last question and we are done now. Thank you once again for your generous time and for sharing your thoughts with us. We greatly appreciate your help and we hope this research will help us improve the health of the member in your community. If you have any specific questions, please do not hesitate to call our free hotline, Linha Verde, at 1458.

**7. Signatures and approvals by Pathfinder staff - NOT RELEVANT FOR MODA ONLY IF PAPER VERSION WILL BE USED**

Pathfinder field staff:		Pathfinder District MCH Officer:	
Signature:	Date:	Signature:	Date: