



Research Study to Assess the Effectiveness of
FFP Public Awareness Campaign Interventions
and Messages

**Qualitative Research Study conducted for
the Food Fortification Programme**

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List of abbreviations

CBA	Cost Benefit Analysis
CSSP	Civil Society Support Programme
FFP	Food Fortification Programme
FG	Focus group
IDI	In-Depth Interview
IPOR	Institute of Public Opinion and Research
IRMNCH	Integrated Reproductive Maternal Neonatal and Child Health
KII	Key Informant Interview
LHS	Lady Health Supervisor
LHW	Lady Health Worker
PWD	Persons with Disabilities
SHNS	School Health and Nutrition Supervisors

1 EXECUTIVE SUMMARY

An extensive qualitative study among the FFP's target audiences and intermediaries in twenty districts across Pakistan finds that the programme is having mixed success.

In a handful of locations, the market is evolving well, with consumer awareness raised and traders growing the supply of fortified wheat flour and ghee. In a minority of districts, the FFP has failed to gain traction thus far, with low consumer awareness and no knowledge of fortification amongst retailers. In the majority of areas surveyed there are signs that the FFP's communication effects are building but the overall uptake of fortified foods is restricted by limited awareness, little or no supply and concerns about costs for the poorest households.

The potential for DFID's investment in food fortification is high: problems of malnutrition are widely recognised, there is latent demand for fortified foods and little negative response from target audiences provided the cost is palatable. The FFP's messaging is understood and generates a positive response, although it sometimes requires further translation into local languages or to be accessible to less literate audiences. There is very little rejection or suspicion of food fortification.

However, barriers identified in the research indicate that the FFP's communication plan is failing to achieve its full potential. The efforts of LHW and their LHS and IRMNCH supervisors are the dominant driver of awareness, with little or no recall of other public-facing activities; where awareness has grown, consumers and traders widely believe that fortified products are not available in their community.

Best practice in development communications encourages programmes to go where the audience is. This explains why the LHW are successful, working within their local communities and going door to door; and why some of the FFP's broadcast promotions are not achieving cut through due to, for example, placement on Cable TV rather than the more popular news channels (itself perhaps a result of the relative cost of cable versus news channels). The community outreach itself has limitations, partly due to the many pressures on LHW and partly due to the very small volume of materials provided in each district.

As the programme looks towards its next phase, recommendations for the evolution of the communication efforts focus on using popular new channels such as GEO, ARY and Express and the greater use of community networks; stronger engagement with trade associations and retailers to improve supply and raise awareness through these channels; and better sequencing so that fortified foods are readily available in a district before LHW promote them to consumers.

The aims of DFID's Food Fortification Programme are practical but ambitious: to promote greater knowledge of fortified wheat flour and ghee, seed positive attitudes towards such products, and catalyse the purchase and use of fortified foods. The FFP's communication activities is a key component of this work.

This large-scale qualitative study indicates that the potential for the FFP's work to be successful is high: there is latent demand for fortified foods, little negative response from target audiences provided the cost is palatable, and an enthusiastic network of LHW who are willing to help catalyse demand. Elements of the communication programme are working in several districts but judging by the participants' perceptions there is still much work to be done on raising awareness and improving the availability of fortified products.

The purpose of qualitative research is to inform and guide decision-makers rather than provide direct answers and recommendations. However, drawing upon the findings of this research and Accadian's own experience in the design and delivery of development communication programmes in Pakistan and elsewhere, we can make clear suggestions that arise from the findings. These include:

1. Ensure that products are available within each District, and that both large and small retailers are engaged in their supply. Understand the shopping patterns of all consumers, and the extreme price sensitivity of the poorest and most vulnerable beneficiaries

2. Given the effectiveness of the work of LHS and LHW thus far, boost the FFP's engagement with target audiences through this channel, and ensure that a much greater volume of materials (pamphlets etc.) are provided for door-to-door outreach. Evaluate the benefit of repeated training and communication activities to better embed behaviour change. Consider ways of incentivising LHS and LHW to focus on fortification. Recognise their association with family planning / birth control and correct this misperception
3. Consider expanding the role and profile of SHNS, who themselves say they can make a significant impact on raising awareness within families
4. Review the activities being delivered through other communication channels, given that the qualitative data here imply they are not effective at reaching target audiences. Access quantitative media consumption data to better understand what media people are consuming and when; assess whether using Cable TV provides value for money when trying to reach target audiences. However, qualitative findings recommend preferring news channels such as GEO, ARY and Express rather than entertainment or local cable stations. The picture in Lahore is a little different given the vibrancy of local media, but overall consumption of cable TV is low.
5. Continue to test and refine future materials before deployment to ensure they are understood and liked by target audiences and provoke the intended changes in behaviour. Check for appropriateness of languages used, translation of technical terms, and comprehension
6. Appoint an individual in each district who has direct accountability for campaign delivery. Continue robust monitoring and effectiveness activities at the district level to track links between LHS, LHW activity etc. and changes in knowledge and behaviour. Support IRMNCH in building monitoring frameworks. Help LHW better manage the competing demands on their time
7. Review how the FFP and its representatives are working with trade associations and retailers etc., to boost their awareness of and willingness to sell fortified wheat flour and ghee. Recognise that reports of (lack of supply) of fortified foods is either a problem in reality or a problem in perception and understanding; change either the reality or the perception
8. If there is a mismatch between communication activities and product supply, confirm that the latter is in place before launching local communications

2 Introduction and Context

This report presents the findings of a qualitative research study conducted by Institute of Public Opinion and Research (IPOR) and Accadian on behalf of the Pakistan Food Fortification Programme (FFP). It represents an analysis of a programme of focus group discussions (FGDs) and in-depth interviews (IDIs) across twenty districts of Pakistan. The report is complemented by transcripts of all interviews and discussions, highlights of which are presented here. It first sets out the research objectives and method, following which the findings are explored in depth. It concludes with a discussion of the findings, identifying common themes and patterns, and conclusions in relation to the client's original research questions.

The FFP has developed a comprehensive awareness-building communication programme in selected districts, delivered in a phased manner once fortified flour and ghee/oil is produced and distributed in these locations. The full list of activities and messages are presented in the Inception Report. The activities took place between November 2018 and April 2019. To assess the effectiveness of the communication activities initiated by the FFP in twenty districts, fieldwork for a qualitative study took place in April and May 2019.

3 Research Objectives and Method

The overall objective of this research study is to determine the effectiveness of individual public awareness campaign interventions and their impact on increasing community awareness of the benefits of fortified wheat flour and edible oil and ghee and as a result to determine their intention to purchase a fortified product. The specific objectives as described in the RFP are:

- Generate evidence of the effectiveness of the district launch events, sessions held with lady health supervisors, school health and nutrition supervisors, and trade association of the benefits of fortified wheat flour and edible oil and ghee.
- Determine the effectiveness of messages disseminated to targeted beneficiaries including pregnant, lactating women, school children, trade associations and the general public.
- Establish the effectiveness of televised commercials broadcast on cable television networks/operators, billboard placement, SMS campaign; billboards and posters, brochures and other information briefs.
- Establish if the messages are reaching Lady Health Workers (LHW), school children, retailer/wholesalers and community via Lady Health Supervisors (LHS), School Health and Nutrition Supervisors and trade associations.
- Establish the viewership of local television channels owned by local cable television operators and determine the effectiveness of televised commercials and scrolls cable cast on the local cable operators.
- Determine the importance and effectiveness of the use of government-approved logos on wheat flour and edible oil packaging with regards to the retailers and purchasers.

These objectives feed into the following key questions, which informed the design of the research tools used in the research:

1. To what extent are the messages of the health benefits of fortified wheat flour and edible oil and ghee passed on by LHS to LHW, and by LHW to their service recipients? Are there any patterns for times or occasions when this is happening more? Are there prevalent messages they are passing on? If this is not happening, why – what are the barriers?
2. Which methods do trade associations, retailers and wholesalers use to pass on messages to consumers? Are there any patterns for times or occasions when this is happening more? Are there prevalent messages they are passing on? If this is not happening, why – what are the barriers?
3. Which public awareness activities are associated with the greatest shifts in knowledge, attitudes, and behaviours for specific target populations and which factors contribute most to these shifts?
4. Which public awareness activities have influenced specific members of households/consumers to purchase fortified wheat flour or fortified edible oil/ghee and what fortified product was purchased as a result?
5. Are there any negative messages relating to food fortification in circulation amongst the different target groups, including conspiracy rumours or communication barriers related to food fortification benefits? If barriers are found to exist these should be ranked in terms of frequency quoted and importance to advocacy efforts.

6. Is the use of logos on fortified wheat flour and edible oil and ghee packing effective in creating a fortified wheat flour and edible oil/ ghee identity within different consumer groups?
7. Is the content of the campaign messages effective for the different target groups?

This report presents the findings of 27 qualitative IDIs and 113 FGs.

3.1 Research design and method

The qualitative research design and method is summarised below. For full details, please see the Inception Report approved by the FFP prior to the start of fieldwork.

The study assesses the effectiveness of the FFP's communication campaign via qualitative research. The strength of qualitative research is its ability to use semi-structured interviews and discussions to probe more deeply on individual responses, and understand the drivers of knowledge, attitude and behaviour. This flexibility means that every conversation is different; therefore, findings are not quantifiable, nor do they provide any statistical analysis. Instead this approach allows us to draw out consistent themes across and within audiences, geographies, by campaign exposure etc., and illustrate these with appropriate verbatim comments where appropriate.

3.2 Target audiences and participant selection

Target audiences for this research include;

1. Lady Health Supervisors (LHS)
2. Lady Health Workers (LHW)
3. School Health and Nutrition Supervisors (SHNS) (Punjab)
4. District Monitoring Officers, Education Department (Sindh and KPK)
5. Lactating and pregnant women, and women of reproductive age inclusive of PWD
6. Fathers of school children and adolescent girls (children of 2-19 years old)
7. Integrated Reproductive Maternal Neonatal and Child Health (IRMNCH) Coordinators
8. Members of trade associations, wholesalers and retailers

To assess whether campaign messages have reached all segments of society without any discrimination, participation of people with a disability (PWDs) was ensured.

Participants were selected according to criteria agreed with the FFP.

- Direct beneficiaries (LHS, LHW, IRMNCH coordinators, DMO and SHNS) who had been targeted by any type of advocacy activity were eligible to participate. They were recruited with the assistance of the FFP.
- Members of the broader community were free-found with the help of a screening questionnaire. In the majority of districts traders were recruited with the assistance of local FFP partner organisations, in the remainder they were recruited directly by IPOR. This may explain some differences in awareness and action between districts.

3.3 In-depth interviews

In-depth interviews (IDIs), also known as Key Information Interviews (KIIs), were the most appropriate research method to reach IRMNCH coordinators and DMOs. Each KII took place with one participant, in an informal environment. They were participant-lead, with an interview guide that ensured the research covered all areas, but with each interview following its own path.

Following each interview, the interviewer made a comprehensive set of notes to a standard format. The IDIs deepened our understanding of how campaign affected the opinion of direct beneficiaries. It also provided us opportunity to see that if and how campaign messages reached these audiences with its full zeal.

3.4 Focus group discussions

The remainder of the participants took part in focus group discussion (FGs). Each group was formed of between eight and ten participants of a similar profile and background, following a standardised discussion guide. Recruitment was partly achieved through 'snowballing': LHS helped recruit LHW, who in turn identify pregnant and lactating women.

3.5 Target districts and locations

Data were collected across twenty districts where advocacy activities had been completed by the end of March 2019.

Table 1: Data collection Districts	
Advocacy activities rolled out in November 2018-February 2019	Advocacy activities rolled out in March 2019
Lahore,	
Rawalpindi,	Peshawar
Islamabad,	Jhelum
Gujranwala	Sajawal
Hafizabad,	Nankana Sb
Faisalabad,	Layyaha
Gujrat,	Matayari
Kasur,	
Karachi,	
Badin,	
Rahim yar Khan,	
Omer Kot,	
Tando M.Khan	
Bahawalpur	

A total of 27 KIIs and 113 FGs took place, of which a full breakdown by target audience is as follows:

Table 2: Data collection sample

Layyah	KII							1	
	FGD	1	1	1	1	1	1		
Matiyari	KII							1	1
	FGD	1	1	1	1	1			
Sajawal	KII							1	1
	FGD	1	1	1	1	1			
Peshawar	KII							1	1
	FGD	1	1	1	1	1			
Jhelum	KII							1	
	FGD	1	1	1	1	1	1		
Total		20	20	20	20	20	13	20	7

3.6 Research tool development and fieldwork

Eight complementary interview guides were prepared, one for each audience, three of which were pre-tested with target audiences before their finalisation and briefing to researchers. Fieldwork was conducted by a small group of experienced qualitative researchers who have the skills to dig beneath the surface of a participant's answers and probe more deeply into what underlies their responses to the FFP's activities.

3.7 Analysis approach

A multi-stage approach has been employed at the analysis stage.

Notes along with recordings taken in each research session were used to prepare summaries in English language for analysis, using a standard reporting template. These summaries were then imported into an on-line relationship database, enabling the research analyst to explore findings by target audience, location, question area etc.

The analysis has been conducted within the framework of the Terms of Reference and the interview guide. For each question area an initial pass of the findings was made to identify emerging themes and findings and create a code frame. This code frame was then be used to conduct a comprehensive analysis of the findings from all interviews and focus groups, including assessing the frequency of responses, and identifying patterns of response within and between each location and target audience.

The analysis has focused on assessing how well the communication activities performed in terms of audience recall, comprehension, response and call to action. It has led to a set of recommendations about if and how the FFP's communication activities could be improved.

A top-level summary of the approach is as follows:

- The discussion guides and objectives as set out in the inception report are the framework for the thematic analysis
- All the interviews and focus groups were analysed within this thematic framework to generate a broad set of understandable patterns around these themes, comparing what different respondents and focus groups said about the specific themes or questions

Such an approach enables the consistent analysis of content from all the qualitative interviews and group discussions, through which an intuitive analysis of the findings was developed. This will subsequently be validated, as far as possible, by triangulating all data and information collected in the project (including information provided by the FFP programme team), and by critical reflection and review by the IPOR and Accadian team.

3.8 Limitations of the research

The report should be read with the following caveats in mind:

- The sample sizes of each location and target audience are relatively small and are not intended to be completely representative of the relevant groups
- Because the interviews and discussions were not based on a random sample, the study does not claim to be an analysis of each target audience, nor is this the intention of the study. We have analysed knowledge, attitudes and behaviours in the context of existing data and the comments of other participants
- In particular, we spoke with only a small number of people from each group in each location. Thus, there is a risk that, for example, women in one location have not been reached by LHW and will report a different experience to those who have been exposed to the campaign
- A deliberate focus on the FFP campaign materials inevitably risks some participants giving what they consider to be socially desirable responses (such as over-claiming recall or a positive response). The semi-structured discussion guide and use of appropriate open questioning mitigates these risks
- The analysis uses detailed English language summaries prepared by the interviewer, rather than a complete native language transcript, therefore some nuance may be lost in translation

We have been conscious of these limitations when preparing the report and are confident that the findings present a realistic summary of the participants' responses and the campaign's effectiveness.

3.9 Overview of analysis

The remainder of this document sets out the findings of the IDI and FGD research, drawn together in a final chapter that addresses the research objectives. It moves from the general awareness of food fortification in the areas surveyed, into a detailed discussion of perceptions of the FFP's activities. Notable differences between groups of participants have been highlighted (by participant type, location etc.); where no differences are mentioned, it should be presumed the findings are widespread across different groups. This includes Persons with Disabilities (PWD), a sample of whom were integrated across the research, and whose opinions and experiences do not differ notably from other parts of the community.

It first presents a thematic analysis across all sessions, and then provides a unique summary for each district.

A defining characteristic of qualitative research is that it is exploratory, semi-structured and cannot claim to be statistically representative. Therefore, no attempt has been made to quantify any of the findings, except for tables that present claimed recall of specific FFP communication activities. Instead, qualitative statements are used to indicate how widespread are the findings. These can be mapped onto a broad scale, as set out below:

Table 3: Qualitative Statements


None	A handful	Some	A minority	The large minority	About half	More than half	A majority	The large majority	Almost all	All
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3.10 Comparison with quantitative data from RDS 2

Where appropriate, comparisons are made with data from the FFP's RDS-II quantitative survey. Of the eight districts in the RDS survey, seven are also canvassed in this qualitative survey. Direct comparison of data is therefore restricted to these seven districts: Gujranwala, Hafizabad, Karachi, Lahore, Peshawar, Rahim yar Khan and Rawalpindi.

4 Food Fortification as a Concept

4.1 Awareness of food fortification

Awareness of food fortification in general, and of wheat flour and ghee/oil specifically, is mixed. Knowledge is high amongst those directly engaged by the FFP and its partners themselves: all IRMNCH coordinators have at least some level of awareness, as do all except one of the SHNS. The FFP has played a leading role in embedding this knowledge, its work being spontaneously mentioned in several sessions under the campaign's brand or, in two cases, the UKAID brand.

Participants in all except one of the LHS groups have also heard of food fortification, and many can provide a detailed spontaneous explanation of the concept and its benefits at the start of the session. This knowledge has been passed on to LHW in all cases, although their understanding is sometimes notably less detailed.

Traders and retailers are much less likely to know of food fortification, despite the important role they can play in raising consumer awareness. In only three locations did traders report having been engaged in briefings on the subject, and in a further two there was awareness among some of the trader participants. The remainder of the groups had no awareness of the phrase. This is likely to be partly a reflection of differences in those who took part in the research, and whether or not they took part in a community briefing session (In the majority of districts traders were recruited with the assistance of local FFP partner organisations, in the remainder they were recruited directly by IPOR). Participants in these sessions were more likely to be aware of FFP activities, which highlight both the effectiveness of these sessions and the low impact of other communication activities.

Awareness is lowest amongst beneficiaries, the majority of whom have not heard of fortified foods. Four of the male (fathers) groups widely recognise the phrase, a further three have low awareness, and the remainder have none. Women (pregnant, lactating, or of child-bearing age) are more likely to have encountered the phrase 'food fortification', eight groups display a good understanding and a further five recognising the concept if not the name. The remainder have not heard of fortification.

In the RDS-II quantitative survey, part of whose sample overlapped with part of the sample for this qualitative study, just over one in ten of the public demonstrated spontaneous awareness of food fortification (11%). Amongst this 'aware' group, fortification was most commonly associated with wheat flour (27%), very few linking it with ghee or cooking oil (both 3%).

The drivers of these patterns of awareness are discussed later in this report.

I know that the vitamins and minerals, the meaning of food fortification is that those things which are important for nutrition are added in it. Like Iron, folic, Zinc, vitamin B1& and others like iodine, vitamin A and D are used separately. All these things are added in things so that our nutritional needs can be fulfilled. I think that a few months back, % to b months back, I don't remember the name of the organisation but few people came who gave us a briefing. In fact, you can say orientation. They came to Badin in BH houses. There it was our monthly meeting where our supervisors were present, they gave it then.

IRMNCH Coordinator, Badin

I was not aware about Food Fortification, but our LHS conducted a session in which people from Education, revenue and health department participated. Then she conducted another program for our MNAs and MPS and GHO etc all participated. Food fortification is a complete diet. Economic situation of our people is not good and the diet they take is not sufficient, due to lack of vitamins and minerals. we did not know about food fortification before attending the food fortification session. We were told that the LHWs should visit the villages and should tell the people about food fortification and its benefits

IRMNCH Coordinator, Sajawal

Three months back we received class regarding food fortification, in this, it was expected from us that we should transfer the awareness we received to LWS and LHW should transfer it to the community. We are included in this because our program is based on mother and child health and when it comes to mother and childcare then everyone is included, the whole community, mother, children and the whole family. In this, mothers are to be given awareness that the diet they are taking, lacks some nutrients. Because the food we used to eat in the past was fresh and contains more energy. The food we are taking and giving to our children today is better, we did not receive such a diet at that age that we are giving to our children today. But we ate limited but better and powerful diet. Children of today are eating more variety and better things, but they don't have much energy. To fulfil this insufficiency, a company named Food Fortification is established by the government, which add basic things like zinc, B1&, folic acid and iron, in oil and flour. So that mother and children can get the basic nutrients they need for their health on a daily basis. And these nutrients are added in minor quantity so that their daily nutrient deficiency can be overcome on a daily basis. Another reason to add them is that mothers especially pregnant women need the nutrients the most. Because they must give birth and children take all the nutrients from the mother and make them weak. So, to end this deficiency, if mothers are taking diet in shape of oil or flour, the deficiency is overcome. Because the infants also become weak as they are growing and lack nutrients. We are included so that we can give awareness, in our EPI program we give vaccines to the children, for diseases like tetanus, but when the child is not born yet, then how can its nutrient's deficiency be overcome? Mothers are taken care of, but their unborn child's nutrients deficiency is fulfilled through the diet by mothers. Thus, when the child is born, its immune system is already strong. So, to overcome the deficiency, nutrients are added beforehand. It is correct that the child is born intelligent, the mother is healthy, and the family gets stable, but the thing is that our work is to spread the awareness. In this three-month-old program, we have asked our workers with emotions and sir has given us strict orders that we must do this on specific days. and we did everything including taking pictures. But the thing is that before giving awareness, the product should be available in the market. Like when I give awareness to someone, the information is fresh in their mind and he will buy the same flour and with time the memory fades away. when you talked about food fortification, I had to think about what this programme was. I also wanted to buy the

flour but now I have to think about what food fortification is about. The product should be available beforehand so that people can buy the product.

LHS, Karachi

Yes, there was a seminar held, from there we came to know about this, it was held at BPCR. Food fortification is the process in which it was told about flour that what in the flour, for mother and the to be born child is it good or essential.

LHS, Sajawal

In this, it was told that food fortification is a process in which for pregnant women and for small kids, oil and flour of wheat, improves the immunity in children and mothers, means it gives energy and in children, it makes the bones strong. Regarding this, it will be given by the mills

LHS, Sajawal

Lady Health Supervisor Miss Razia Responded that source of information was a seminar conducted at "Ali Shah Restaurant" at the same day we also participated in a Training session at DHO office in which we got information about Food fortification, where we were informed about Vegetable ghee, there we got knowledge; fortified food contains Iodine, Vitamins and other minerals, fortified food is made for children and people who suffer from weakness and nutrition deficiency it contains Vitamins Folic acid and other minerals

LHS, Tando M Khan

Yes, this is a program in which vitamins A, B, and C are added in the food. The food in which there are vitamins, and which helps in the mental and physical nourishment of the children. I came to know about this when a few months back there was a meeting in DCO office Badin. I attended the meeting where people from Islamabad came and they told us in this oil and ghee vitamins A and D, iron and such things are present. So, they gave us information which we were unaware of

DMO, Badin

In our daily life we usually communicate with different people, but we have not heard about food fortification before, no any organization has told us about this term, and No any program or gathering is organized regarding fortified food

Man, Sajawal

We just know that at the time of making wheat flour, the mills extract the nutrients from it. So, the wheat flour lacks the nutrition, to fulfil it we need to add some vitamins and minerals in it, I think that process is called food fortification

Woman, Gujranwala

The wheat flour providing by the mills is just garbage, no nutrition in it, so in the process of fortification the necessary vitamins and minerals are added in it

Woman, Gujranwala

No, we are not aware of food fortification, nobody has ever told us about it. We do not have electricity, so we do not watch TV. No Health Worker has ever told us about it

Woman, Tando M Khan

4.2 Understanding and benefits of food fortification

The phrase 'fortification' itself comes in for criticism in several locations, particularly from LHW and LHS who have to explain it to audiences with low or no literacy. It is an alien word whose translation into Urdu or Sindhi can sound clunky. Several LHW suggest using simpler, more widely used terms relating to vitamins, energy, nutrition etc.

Despite this barrier and the relatively low awareness of 'food fortification' per se, when the phrase is explained its benefits are widely recognised and strongly approved by all groups in this research. This implies that the FFP is operating in a relatively fertile information environment, and relatively few people are likely to reject its messages. Broad themes that emerge related to fortification are consistent across most audiences and locations. In broad order of precedence:

- Tackling malnutrition
- Stronger children and better child development
- Improved mother's health
- Stronger bones,
- Greater energy
- Improved immunity
- Helping pregnant women
- Tackling anaemia / blood deficiencies
- Overcome the problems generated by poverty
- Avoiding food that may be tainted

Benefits are almost always said to fall to pregnant women and children; reference to lactating mothers is very unusual.

We can see nowadays that the ratio of malnutrition is high, and these are almost the things which are used by every household, flour, and ghee. Although we say that we don't eat chicken and meat and other things like that. But by all means, flour and ghee are in use on a daily basis. If we do fortification in this, of these things, of micronutrients then we can save our children from malnutrition.

IRMNCH, Badin

It increases the immunity of children and mothers. When children or mothers use it, as vitamins and mineral are very important for them so they will get the benefit. It is good for the future generation as a healthy mother gives birth to a healthy baby. It will nourish the children and they will become strong mentally they will be healthy

LHW, Rawalpindi

The added minerals and vitamins are important for pregnant women, end night blindness, make bone strong, and improves immunity. There are so many requirements that women of today are in great need. For the girls, as the bodies of girls during puberty are not growing, their chests are not growing, pain in their stomach. Young girls are suffering from this greatly and there are increased cases of miscarriage. They can get these things with more nutrients and energy. Because our girls are mostly surviving on rice and potato means that they use things which are harmful to them. They hardly eat wheat and never use medicines. Hence, they can't resist eating chapatti, which is essential once a week. If rice is cooked once or twice a week then they have to eat chapatti for four days, so this is how nutrients will reach them.

Woman, Karachi

Most of the women think that this flour and ghee is used for family planning meaning our government wants that we should not give birth to children. Ladies have a hundred problems that's why they were saying that the government invented flour and this ghee because to lessen the number of childbirths. This we should not use; most women have this fear. Obviously if used it will be beneficial.

Woman, Gujranwala

I don't think so even a single person know about these fortified products

Man, Hafizabad

Note that whilst the FFP likely has clear boundaries on what constitutes fortification within the programme, these do not exist in the minds of target audiences. No distinction is made between wheat flour, ghee/oil and other food stuffs. Parallels are drawn with previous iodised salt promotion campaigns by IRMNCH coordinators and LHS / LHW in several groups. This overlap is accentuated by the multiple demands on the LHW's time, in which the FFP's messages are just one of several they are expected to promote, implying that LHW are already heavily burdened.

Once an understanding of food fortification is confirmed within a focus group, participants are often well informed on what food fortification involves. They cite an alphabet of vitamins and other additives, the accuracy of which increases with their closeness to the FFP and its partners. Most commonly mentioned are vitamins A and D, plus iron and zinc. Others talk of vitamins B, B-12, C, E, folic acid and calcium. Again, there is no distinction between groups and locations.

There are 17 or 18 types of vitamins like they are saying, I have read in the literature somewhere on health that cancer is not a disease. There is vitamin 17 or 33 or something like this, which result in the development of tissues or cysts if they are deficient in the body. Like in the past there was a disease of scurvy which was due to the shortage of vitamin C and people used to die but when Vitamin C was available to the people in great quantity hence there is no trace of scurvy today. Means in the ghee, especially A and D or here this time, this is my understanding which can also be wrong as I have read or heard that here the broiler chicken is unhealthy. Means that it is deteriorating because there is no control on it that what is being fed to it. Now, what is being fed to it, in the broiler chicken the disease which is very common and dangerous is a heart attack. They

suffer from heart attack because they are feed in great quantity and the have high haemoglobin level and because of this the chick suffers from a heart attack. Now to cure a heart attack the most less- expensive medicine is maybe called “samoofarm” or “Sanchia” (Arsenic). Now when they are given the quantity of arsenic in 40 days, 4 times after every few days then the quantity of arsenic is so high in the chick’s flesh - and whatever we use from the bones to all over it is stored. And whoever eats more, the arsenic goes into it and the basic behaviour of arsenic is that it creates a barrier between the tissue, arteries, veins or capillaries. This is why it is a general observation that many people break their bones. Like they flip to the other side and bone is broken. The reason is that calcium is not being absorbed in the bones. And the only firm understanding I have behind the absorption of calcium in the bones is that if vitamin D is not present in your body then calcium will not be absorbed. And the barrier of vitamin D is arsenic. This is why the bones of many people are weak because vitamin D is not being absorbed and is not letting calcium to be absorbed. So, this is how vitamin D is very important, vitamin D is very important to sustain the health and physic of human and to make it strong. There are two sources of Vitamin D, one is that you intake, second is that you get it from the sunlight. Our behaviour is that we are taking sunlight in small quantity and are sitting in Air-conditioned rooms. We are completely blocking the sunlight it is not available from anywhere. So, there is a shortage in this.

DMO, Umar Kot

Vitamin A and D are found in oil/ghee and both of these vitamins are beneficial for health. Vitamin A makes eyesight stronger while Vitamins D makes strong bones of entire human body. In fortified flour Vitamin B12, zinc, folic acid and iron are present. Zinc prevents diseases, iron and folic acid provide strength and power. On the contrary, low quality flour is not pure and it contains elements that cause kids to become sick.

LHS, Sajawal

The benefits are they are very good for pregnant women because in pregnancy she gets too weak and she needs good food which contains healthy vitamins and minerals. It is good for children because it gives health to children, their mental growth as enhanced immunity become well.

LHW, Peshawar

Everyone eats food but this food must be healthy, so keeping this thing in mind one should prefer to take fortified food so that they become healthy enough.

LHW, Peshawar

Vitamin A improves our eyesight, Vitamin D makes our bones strong and Vitamin B 12 in our food improves our immunity, Zinc saves us from diseases and folic acid and iron produce iron in our body and increases blood.

LHS, Sajawal

4.3 Current use of fortified foods

Despite a majority of participants having at least some understanding of the nature of food fortification, the current use of such products remains low. In only one or two groups does the majority use fortified foods today. Only a small minority of consumers overall believe they are currently purchasing fortified foods, and the same for LHS and LHW. This is predominantly a function of lack of awareness and / or lack of availability rather than a rejection of the concept of fortified foods.

Answering this question is made more complicated by uncertainty in the minds of many (including LHW and traders) about what constitutes a fortified food. In particular, they are unclear whether branded oils such as Dalda Oil or Sufi

Cooking Oil are fortified. In wheat-producing districts take up of fortified foods is further reduced by families' frequent use of chakkli mills to produce their own wheat flour.

Findings from RDS-II confirm that there is a sharp difference between supply of wheat flour and oil/ghee. For oil/ghee, coverage is good, with around 85% of consumers purchasing a fortified brand. For wheat flour, however, data from FFP's Fortis database reveals that only 12 -14% of total output of signed up mills is currently fortified. RDS-II found a negligible number of fortified wheat flour samples available at retail outlets.

We want to use it because of its too many benefits, yesterday I asked one of the shopkeepers nearby my house about the fortified ghee, oil or flour but he said he doesn't have it.

LHW, Peshawar

The problem is its unavailability in the market. Even it is like often it may be available, but we don't know the specified name of brand, but mostly it is true that it is not even available in the market.

LHW, Peshawar

Although there are some oil and ghee in which vitamin a and b are added and they are available in local shops even."

LHW, Peshawar

We eat fortified flour because in the training they told about it. We mix it in grinded flour so they can eat.

LHW, Islamabad

The flour is not available in the market and the ghee we are talking about, that too, the company makes a claim but we don't trust it. A few days back, I found research that there is a company which checks the food, there was a report by them that in all ghee there are no vitamins added. They didn't recommend even a single company which made it.

SHNS, Hafizabad

We are unacquainted by the term food fortification, we use "chaki ka atta" refined flour and oil/ghee available in cans or bottles but we never noticed whether that oil contains additional compounds elements or not

LHS, Matayari

When I heard about fortified food in seminar and I brought pamphlets with me at home and show to my family, my husband and my other family members shown reservations, they said ,there is no need to change or add anything in flour, and it has been added there medicine for birth control, afterwards I did not try to purchase it

LHS, Tando M. Khan

5 Awareness of FFP Communication Activities

5.1 Sources of information

At the FFP's request, all participants in every interview and focus group were asked whether they recalled seven FFP communication activities. The findings are summarised in the table below, with district breakdowns from page 32 onwards.

Table 4: FFP Communication Recall: Overview

FFP Communication Recall: Overall							
	Audience						
	IRMNCH	DMO / SHNS	LHS	LHW	Trader	Women	Men
Sample Size	19	91	139	195	125	183	171
Cable TV	5	33	19	26	15	25	18
Social media / Facebook	8	21	10	8	11	11	7
Mobile text / SMS	8	6	37	38	2	9	4
Awareness session	13	91	129	137	30	68	15
Billboards	10	46	41	29	8	25	8
Brochures	15	77	89	132	28	58	16
Posters	12	75	80	140	28	61	8

It must be understood that these figures are indicative only and **are not statistically representative**. They are not drawn from a representative cross-section of each target audience; show materials were not used to prompt awareness; and scores from larger focus groups carry more weight than smaller ones.

RDS-II data suggest that TV has played some role in creating awareness of fortification in those districts surveyed, being the most important source of information (49% for wheat flour and 64% for oil) for the 11% of respondents who were aware of fortification. Hafizabad, which had no TV adverts, had substantially less awareness due to TV (17% for wheat flour and 29% for oil).

5.2 LHS and LHW

A thorough review of all 130+ sessions in this research study confirms that **sessions with LHW** are the dominant way in which women and men learn about the FFP and its activities. Not every beneficiary in every location has been reached by a LHW, given the scale of their task, which provides a useful control group in the analysis: where the public has been exposed to all of the FFP's activities *except* LHW engagement, awareness of food fortification is likely to be low; where they have been reached by LHW, awareness is much higher. This implies that broadcast

and outdoor media alone are not effective at stimulating demand for fortified products – LHW outreach is the key component. Conversely LHW sessions can, by themselves, succeed in stimulating awareness and demand.

Whilst LHS and LHW are generally complimentary about the briefings they received from the FFP, a consistent complaint from these groups (and from the SHNS) is the very small number of posters and pamphlets that were given to them. LHW want to leave materials with families during their community sessions and in door-to-door outreach, which can total hundreds of families. However, they were often given one or two posters and a handful of pamphlets, which undermines their ability to influence behaviour. Some resorted to photocopying the materials at their own cost, and one SHNS produced their own panaflex. If the FFP work is repeated there is a clear demand for investing in and distributing a far greater volume of printed material.

IRMNCH coordinators, as the supervisors of LHS and LHW, are generally concerned about the demands placed on their teams' time and their limited ability to reach across wide areas and large populations. This will likely be one of the significant constraints on the FFP's ability to achieve an impact. The situation is further complicated by the multiple themes LHW are asked to pursue such as polio vaccinations and family planning, as well as nutrition and food fortification – indeed, some of the public strongly associate LHW with family planning, which could explain why they link food fortification with birth control. In some locations both supervisors, and the LHS and LHW themselves, have asked for financial support for their activities.

An additional concern raised in several locations is the need for more sessions with LHW and their target audiences – both to deepen LHW's understanding of food fortification, and the repetition of messages to consumers so they have a greater chance of being remembered and actioned. They note that at the moment food fortification briefings are one-off rather than continuous efforts, which limits their long-term effectiveness.

RDS-II data reinforce the qualitative finding that awareness due to LHWs was uneven across districts, ranging from 0 to 13% recall.

We did a single session with LHS and LHWs. So, we cannot say that the LHS and LHWs are spreading awareness continuously. Besides this we have no information from where we can get fortified flour and ghee and which brand of oil ghee and flour people should use. We have two procedures of gauging the performance of LHS. First, we do direct supervision of their work. Secondly, we have IRMNCH/Program District Coordinator, M&E officer/So then we have program officer we made check their activities in field. LHS consolidates the monthly reports of LHWs. We provide our feedback after monitoring the main indicator. Besides this we also conduct session with them. We called sessions of LHS and LHWs in clusters and provide them direction. We also have a WhatsApp group in which we share our feedback and these LHS or LHWs can also share their field related issues through WhatsApp. So, we resolve the issue then and there. So far, we have conducted only an introductory session with them. So how can we take their feedback and check the effect on people's health. Also, the fortified food items are costly and are unavailable in the market.

IRMNCH Coordinator, Faisalabad

The target given to us is totally achieved. We have done the training sessions; the awareness sessions and we have proof of it too. The campaign was started in December but the problem with this campaign is that there is no availability of fortified items in the market. And if there is no availability then I don't think so that oral message can have any successful results.

IRMNCH, Karachi

It is a community-based program. Messages are reaching to the community through LHS and LHWs, when we make the LHWs program it is based on community need, because they access the people. LHWs do their work in very efficient manners. Those who got training are well informed

about the importance of food fortification. LHW are well informed of importance of fortification food. We tell them about the fortification food and insh'allah they will use it

IRMNCH, Rawalpindi

5.3 Schools outreach

Most SHNS and DMOs are enthusiastic about the FFP and its materials. The large majority have implemented an outreach programme with teachers and students as widely as possible, and some have anecdotal evidence that parents are coming back to them with questions after their children convey the message about food fortification. Their reach is restricted by limited transport to reach all locations, and the paucity of materials provided by the FFP to educate and leave behind with children.

I did two type of sessions separately with teachers, headmasters and students and informed them about food fortification. I also share the books with them. In my session with children I informed them about uses and benefits of food fortification and asked them to share this information with their parents.

When we talked to teachers about the benefits, they realised the importance of fortified food.

DMO, Sajawal

5.4 District launches

The concept of district launches has more than one meaning to participants, who can take it to include briefing sessions for traders or LHW as well as the formal launch. Of those in the research who may be considered targets for the launches e.g. IRMNCH coordinators and LHS, fifty attended a district launch, twenty did not. The launches were considered by participants to be broadly successful in conveying information about food fortification. Three in four remembered watching a video at a launch, the remainder be thwarted by bright light or a lack of power.

[The documentary] was about fortified wheat flour and edible ghee/oil. The importance of fortified food was shown to us, where these fortified foods are prepared like factories and mills. Logos of fortified food were shown. A happy family which was using fortified food was shown.

LHS, Umar Kot

We learned the importance of fortified food and a variety of foods like different vegetables should be used in our daily nutrition.

LHS, Umar Kot

It contained messages for food fortification, and we were advised to propagate this message at the community level through our LHW

LHS, Umar Kot

Once the launches took place, LHS consistently took steps to inform their LHWs and establish expectations for communicating with their local communities. As many materials as possible were passed on to the LHW. Some LHW felt that their briefings were insufficient in number or depth to fully equip them to answer questions raised by the community.

When we went to the field, we gave them the brochures, to pregnant women, girls who are growing we gave them awareness, we gave it to them. Although the brochures were few in number, but we distributed them.

LHW, Karachi

We didn't receive many. We held the session and gave awareness by pasting them in our Health house for the health session.

LHW, Karachi

I also informed the community, but everyone was asking for paper, but they were less. So, I showed them, explained to them, and taught them.

LHW, Karachi

We also had them in only small quantities, so we also gave in small quantities. Gave only to special people. Else we explained the details about it, held sessions in our home. Gave an explanation about it, showed them that this is the oil and the flour. They also took pictures, but they were unable to find it in the stores.

LHW, Karachi

LHWs attended one meeting with their supervisors in the meeting hall of district health office. The meeting was about polio field work and also in meeting lady health workers had discussion on food fortification/ program, LHWs shared conclusion of the meeting i.e. “ supervisors called meeting and shared knowledge about fortified food, supervisors told in future fortified food will be available in markets, further they directed us to call meetings with communities in our working areas and give them knowledge about food fortification and spread this message as much as you can. The LHWs said after meeting all of us had a question that whenever we go and conduct meetings with community women and we suggest people to use anything to make their lifestyle and health better, then people ask from us will you or government provide us such things? Then it becomes very difficult to handle these kinds of responses.

LHW (interviewer summary of conversation), Sajawal

We hold meetings separately for the males and the females, there we give awareness. When we meet someone separately, we tell them. And if we are made to participate in the district sessions, more information and material will be provided to us which is a better option. Because we are just told about vitamins and minerals and that these things should be used. Detailed training will be better. So that we can tell others, including shop keepers in a better manner. We can give brochures to the shopkeepers.

LHW, Rawalpindi

We shared it with our workers and called them to the centre for proper health session. And we read the material they had provided us. We also displayed it on our BHU. We also posted the posters. They are still present now. Yes, we all did, and the posters are posted on the BHU. We displayed the posters on BHU. We received four posters in total.

LHW, Gujranwala

Health workers said their LHS have given us posters, one poster to each LHW in health offices, during our monthly meeting at DHO office and our LHS directed us to paste it in offices so that every visitor can read it. We have not attended any session or training about FFP and very limited posters were given to us, we are very busy in our fields so I think in this short time and limited resources we cannot spread this message and can't understand food fortification, until and unless proper training and guidance is provided to us.

LHW (interviewer summary of conversation), Badin

5.5 The role of TV

Although there is some claimed recall of cable TV advertising about fortified foods, probing further into these answers finds that some of this awareness is from well before the FFP launched, and / or relates to the advertising

of existing food products such as cooking oils rather than the FFP's own messaging. The table above is therefore likely to overstate awareness of the campaign's TV activities.

Asking participants to state their media preferences is less accurate than a formal media survey, thus the data here should be treated with caution, but when asked which channels they watch most participants of all backgrounds – if they have access to a working TV at all – prefer news channels such as GEO, ARY and Express rather than entertainment or local cable stations. The picture in Lahore is a little different given the vibrancy of local media, but overall consumption of cable TV is low. This may present a challenge given FFP's current TV media plan.

5.6 Mr Bharpur and associated logos

Awareness of the Mr Bharpur character is mixed both within and between districts, only a minority recognising him. Recognition is greatest among SHNS who are familiar with the storybook in which he features.

Regardless of whether or not they had seen him before, his character was easily interpreted by the target audiences as someone who is healthy, powerful and full of energy. He performs his function as a signifier of healthy (fortified) food, and a handful of people claim to have seen him on flour sacks or ghee tins.

This picture is about a happy character, this cartoon has healthy and strong body and it is showing that is eats good food

Woman, Badin

Mr. Bharpur is a healthy and strong character in his story and it wants everybody to become like that. It is explained that if a child does not take vitamins then his/her brain will be weak and child can't grow healthy

LHW, Sajawal

A story is present on the booklet from there. I agree with the message. The message is that the food we use, first of all, we should see that, what vitamin are we getting and what things are beneficial for eating. This is what Mr. Bharpur says. So, what kind of nutrients are present in what kind of food we can eat. Food fortification is very important. In the current scenario, pure things are hardly available. And food fortification is right. Fortified food is beneficial for children, women, and adults

Trader, Sajawal

More generally it is assumed that fortified foods can be identified by their packaging and, for those who are literate, what is written on there. Understanding of this is higher among the LHS, LHW and SHNS than consumers themselves.

5.7 Role of trade associations and retailers

A minority of traders and retailers recognise they have an important role to raise public awareness of fortified wheat flour and ghee, but few say they have the appropriate marketing collateral or access to fortified foods for resale.

6 Response to FFP Activities

6.1 Changes in awareness of fortified wheat flour and ghee

It is difficult to assess the impact of the FFP on raising awareness of fortified foods, given that it is a work in progress and perceptions are often based on personal experiences of whether or not they have encountered LHW outreach activities. Overall there is evidence that, when contacted directly in the community, the FFP succeeds in deepening knowledge of such products and their benefits. Demand has been catalysed, but this is not yet met by supply.

6.2 Message comprehension

The FFP's messages are broadly seen as being clear and easily understood, once translated (where necessary) into language that is accessible for target audiences. The main observations are about the use of technical language such as 'fortification' which can be confusing or inaccessible for lay audiences.

6.3 Barriers to consumption of fortified foods

A consistent set of barriers to using fortified foods are identified across most groups and locations:

- **Awareness.** LHS, LHW and others express concern that those who are in more remote areas, or are less literate, will not be exposed to the FFP's campaign and will not know about the benefits of using fortified food. This regularly emerges in discussions with traders or consumers who have themselves only learnt about fortification through this research process
- **Availability.** In the majority of districts, it is perceived that fortified food is not available despite the best efforts of LHW to promote it to target audiences. Inevitably this will undermine the impact of the FFP as consumers become frustrated with a lack of access to the desired products
- **Price.** Combined with lack of availability is uncertainty over the cost of fortified food. Many poorer consumers are extremely price-sensitive and expect that fortified wheat flour and ghee will be more expensive than the standard products. If not true, this is a theme to be addressed in future communications¹

In addition, there are localised barriers to switching to fortified foods, particularly flour. In wheat-producing districts many families use a chakkli (local mill) to grind their own flour, which will not have nutrients added to it. This was a common observation in several locations, thus the FFP may wish to address how to support these consumers, who would still be happy to switch to fortified ghee.

Meanwhile, in Islamabad and Gujrat there are reports of distrust in the fortification process and the intentions of its sponsors. Some consumers are said to believe that, following the 'polio conspiracy', food fortification is a cover for family planning and birth control. One even attributed this plan for population control to Imran Khan himself. Given the attribution of the campaign to UK Aid, this may be a difficult belief to challenge, although it is not widely held.

I think there is no barrier in using fortified items, if we bind flour mills owners for the fortification process then there will be no issue in sale and purchase.

¹ RDS-II found less evidence of price sensitivity with 79% of respondents indicating their willingness to purchase fortified wheat flour even at a cost higher by PKR 1 per kg than the unfortified alternative, and 82% willing to buy fortified oil/ghee if it was priced PKR 1/kg (or litre) higher. Low price sensitivity was seen across all income levels, though with higher quintiles showing even lower sensitivity for wheat flour only.

Trader, Peshawar

The first thing is fortified food flour or oil is not available in local markets and if it is available, not yet to our knowledge; secondly, a majority of people don't have information about fortified food. The majority of people are farmers and they have own wheat crop and likewise they use mustard oil from mustard crops, both of these things are easily accessible and less costly comparatively available products in market, so it could be a big reason for not using fortified food if it is more costly."

LHW, Badin

First it is not available in the market, secondly people will only use it when they will be given awareness. The barriers are that it is in the mind of the people that this should be given to us for free also. It is embedded in the minds of the people that they should get everything for free. Look at the area not only belongs to Lady Health workers. Other villages are also present here. So here if all the community will receive the message that will be good.

LHS, Sajawal

It is said that when they see "UK Aid" the religious scholars say not to use any imported thing. Eat "desi ghee" (Homemade ghee), eat "desi flour" (freshly grounded). Grind it yourself.

Trader, Sajawal

There is a mindset of people that; every new thing which have more benefits will be expensive, and the cost of food restrict them to accept changes, other thing is mostly people do not taken it seriously yet, fortified food is not available in market

LHW, Umar Kot

They say that it is related to family planning. They say that first polio drops, then salt and now they are using a new method to induce infertility.

LHS, Gujrat

They say that our forefathers, grandparents, used this flour. They have used this flour and have given birth to us. So, you want to end our generation. Sometimes you come and ask us to have polio vaccination many people have disagreed on this.

LHS, Gujrat

6.4 Perceived effectiveness of FFP communications

Towards the end of each session participants were asked whether or not they considered the FFP's communication efforts to have been effective. The findings are evenly split: 40 groups consider it effective, 47 ineffective, and 35 groups don't know or are divided in their opinion.

The rationale for these opinions echo what is covered elsewhere in this report.

Effective ratings are attributed to a general raising of awareness, especially due to the efforts of the LHW passing on knowledge through community sessions and door to door outreach. They are critical, however, of the lack of fortified food availability at the time of communications activity

- **Ineffective** ratings are given by those who are frustrated by a lack of knowledge, insufficient training or the mismatch between communications and availability

- **Don't know** ratings are typically due to a sense that it is too early to assess the FFP's effect in changing behaviour, given that such change can take time, particularly in conservative rural communities

6.5 Participant suggestions for improvement

Aside from the critical task of improving the availability of fortified wheat flour and ghee in all districts, a clear pattern emerges in participants' own suggestions for improving the FFP's communications effectiveness:

- More and repeated training sessions for LHW, to better inform beneficiaries and response to their questions
- More and repeated outreach sessions for beneficiaries, to broaden the reach of the LHW's impact
- Providing samples to help overcome inhibitions about the quality and taste of fortified foods
- A greater volume of materials to help LHW embed knowledge within their local communities, and for SHNS to reach a large proportion of their schools network

7 District Profiles

This section summarises responses within each district. They are organised alphabetically.

7.1 Badin

There is little or no evidence of the FFP's outreach and impact in Badin. The IRMNCH Coordinator and DMO have attended briefings (the former cited Save the Children's work as well as implying he had received a briefing from the FFP's partner) and showed an understanding of the meaning and benefits of fortification. However, there is no formal monitoring of LHW, all of whom showed low awareness of food fortification.

Table 5: FFP Communication Recall: Badin

FFP Communication Recall: Badin							
	Audience						
	IRMNCH	DMO / SHNS	LHS	LHW	Trader	Women	Men
Sample Size	1	1	-	11	7	9	10
Cable TV	0	1	-	1	0	0	0
Social media / Facebook	0	0	-	0	0	0	0
Mobile text / SMS	0	0	-	0	0	0	0
Awareness session	1	1	-	11	0	0	0
Billboards	0	0	-	0	0	0	0

Brochures	1	1	-	11	0	0	0
Posters	1	1	-	0	0	0	0

The LHW do not use fortified foods themselves at home. They did not attend any briefing sessions or launches and were each given only one poster to display in their office. They feel they have neither the time nor the knowledge to spread information about food fortification. In two separate sessions it was suggested that the term 'fortification' is a tricky word, and that phrases such as 'vitamins' and 'energy' are a better fit.

Traders have no knowledge of food fortification and say that they do not sell such products, since they are not available from their suppliers. Only one woman had any awareness of fortification, from a previous Save the Children briefing. The other women and all of the men had no awareness. It is notable that, despite this lack of previous exposure, there is no overt rejection of food fortification in any session; the benefits are understood and welcomed, and there is latent demand for such products. It is unclear, beyond a lack of cascading of information and an absence of supply, why the programme has not yet succeeded here.

Amongst all partner audiences the main barriers are thought to be low awareness, a lack of availability and perceptions of higher costs.

7.2 Bahawalpur

The FFP's performance in Bahawalpur is very weak. Judging by the participants' comments this is due at least in part to a breakdown in the relationship between the FFP's local partner and the LHS. Whilst the IRMNCH coordinator believes that the messages are clear, and LHS learnt about food fortification at an FFP session, the LHS were unhappy with how they were treated at this session and withdrew their cooperation. They were not offered any refreshments or lunch, despite attending in their own time and at their own expense.

Table 6: FFP Communication Recall: Bahawalpur

FFP Communication Recall: Bahawalpur							
	Audience						
	IRMNCH	DMO / SHNS	LHS	LHW	Trader	Women	Men
Sample Size	1	8	10	8	9	8	8
Cable TV	0	2	0	0	0	0	0
Social media / Facebook	1	6	3	0	0	0	0
Mobile text / SMS	0	2	0	0	0	0	0
Awareness session	1	8	10	0	0	0	0
Billboards	1	6	10	0	0	0	0
Brochures	1	8	10	0	0	0	0
Posters	1	0	10	0	0	0	0

This lack of cooperation from LHS prevented any further communications through LHW to target audiences, and there is no evidence from the focus groups of the latter's understanding of food fortification. This provides a reminder of the challenges when relying upon voluntary networks, and the importance of treating all parties with respect.

7.3 Faisalabad

The FFP's communication plan is being implemented with some success in Faisalabad, with LHW reaching female beneficiaries having been previously briefed by their LHS.

Table 7: FFP Communication Recall: Faisalabad

FFP Communication Recall: Faisalabad							
	Audience						
	IRMNCH	DMO / SHNS	LHS	LHW	Trader	Women	Men
Sample Size	1	-	8	9	10	8	9
Cable TV	0	-	1	1	2	2	1
Social media / Facebook	0	-	0	1	0	0	0
Mobile text / SMS	1	-	0	0	1	0	0
Awareness session	1	-	8	6	2	8	0
Billboards	0	-	0	6	1	1	0
Brochures	1	-	8	9	1	0	0
Posters	1	-	0	7	1	0	0

The primary concerns of those implementing the plan is the limited time and scope available for it. The IRMNCH coordinator emphasises that the engagement with LHS and LHW is a one-off rather than continuous which, given their competing priorities, limits their ability to influence target audiences. This is echoed by the LHS and LHW themselves.

Traders articulate their customers' concerns about the perceived poor quality of flour provided by large mills, and reports of widely adulterated foods, which provides an opening for guaranteed fortified foods. However, there is no spontaneous consumer demand at the moment. Women and men understand the benefits of food fortification, even if they do not recognise the word itself – one man believes it to the name of a manufacturing company – but availability and concerns over cost limit their ability to purchase fortified wheat flour and ghee.

7.4 Gujranwala

Despite the Gujranwala findings be amongst the most positive in this study, only one of the seven qualitative sessions here considered the FFP's communications campaign to be successful.

Table 8: FFP Communication Recall: Gujranwala

FFP Communication Recall: Gujranwala							
	Audience						
	IRMNCH	DMO / SHNS	LHS	LHW	Trader	Women	Men
Sample Size	1	6	11	13	7	13	8
Cable TV	0	1	1	3	0	0	0
Social media / Facebook	1	0	0	0	2	0	0
Mobile text / SMS	1	0	11	13	0	0	0
Awareness session	1	4	11	13	4	0	0
Billboards	0	4	0	0	0	0	0
Brochures	1	4	11	13	4	13	0
Posters	1	4	11	13	4	13	0

Every group interviewed is aware of food fortification, either naming it directly or talking more generally about its benefits. The reach of the LHW network was wide and understanding of the concept of fortification was good.

Despite this positive baseline, there is a need for deeper understanding. For example, traders, some of whom attended two briefing sessions, recognise the concept of fortification but still cannot tell whether or not what they sell is fortified. Some LHW were confused by the term 'fortification', taking some time to realise it was a concept rather than a specific brand. And there was some reported pushback on fortification by beneficiaries as the message was delivered predominantly through LHW, who are themselves associated with family planning and polio 'control' activities.

Amongst the health professionals and implementers there are repeated demands for more communication materials to distribute to householders and students, and a concern that an over-reliance on LHW as the communication network will limit the campaign's reach. There was also some criticism of the FFP's fit in this region given that the majority of households in rural areas grind their own wheat flour or use that from local mills, and therefore would not benefit from any fortified products.

The RDS-II data reinforces these findings. Spontaneous awareness of food fortification as a whole is relatively high (15% in Gujranwala), and those who have heard of fortification are more likely than elsewhere to link it with wheat flour (41%). The widespread use of *chakki* flour is confirmed, either their own (56%) or bought (25%). Recall of communications about wheat fortification (42% at least some recall) and ghee fortification (48%) is the second highest of the eight districts surveyed in RDS-II. Retailers link fortification most commonly with flour (37%).

7.5 Gujrat

Research in Gujrat suggests the FFP is performing relatively well. There is evidence that information is flowing from the district level briefing sessions to beneficiaries, and all groups except for traders show awareness of food fortification and its benefits. One LHW spontaneously mentions having received text messaging on the subject.

Table 9: FFP Communication Recall: Gujrat

FFP Communication Recall: Gujrat							
	Audience						
	IRMNCH	DMO / SHNS	LHS	LHW	Trader	Women	Men
Sample Size	1	10	9	10	6	8	9
Cable TV	0	1	1	2	0	8	0
Social media / Facebook	0	0	0	0	0	0	0
Mobile text / SMS	0	0	0	1	0	0	0
Awareness session	1	10	9	10	0	0	0
Billboards	0	0	0	0	0	0	0
Brochures	1	10	7	0	0	0	6
Posters	1	10	9	10	0	0	3

Only a minority are currently using fortified foods, predominantly those in the SHNS group who use fortified ghee but not flour due to lack of availability. The latter remember their training from AAGHEE. The LHS and LHW groups both complained of insufficient materials, the former having received only two posters and two pamphlets each to share within their community. One made photocopies to distribute more widely.

There is evidence that the target beneficiaries are receiving information from their LHW and are amenable to cooking with fortified foods. Women and men regularly suggest that free samples would help persuade them that fortified wheat flour and ghee is a viable alternative. Men have attempted to buy such products, but they are not found in local stores, although some have tried to buy it when visiting Gujrat city. Only traders are not engaged in the campaign, showing little awareness of food fortification and not selling such products. It is possible this sample was drawn from store owners in a rural area when supply is said to be less common.

An interesting nuance emerges in the feedback from the LHS, who describe some beneficiaries considering the need to use fortified foods as 'another problem for us', something else expensive for them to do. They also say that some are worried there may be ulterior family planning motives for the provision of fortified food.

7.6 Hafizabad

The FFP's apparent performance in Hafizabad is disappointing. Although the IRMNCH coordinator, SHNS, LHS and LHW groups understand the concept of food fortification and have participated in the district launches / training, none of this knowledge has filtered down to those who took part in the female and male focus groups.

Table 10: FFP Communication Recall: Hafizabad

FFP Communication Recall: Hafizabad							
	Audience						
	IRMNCH	DMO / SHNS	LHS	LHW	Trader	Women	Men
Sample Size	1	8	8	12	-	8	8
							0
Cable TV	1	4	2	3	-	0	0
Social media / Facebook	1	1	0	0	-	0	0
Mobile text / SMS	1	0	8	0	-	0	0
Awareness session	1	8	8	7	-	0	0
Billboards	1	2	8	0	-	0	0
Brochures	1	8	0	7	-	0	0
Posters	1	8	8	7	-	0	0

It is unknown whether this reflects those who were recruited to the latter sessions, who have not yet been reached by LHW; a broader failing of the communication programme; or simply the lower relevance of FFP given the high proportion using chakli flour. It does however suggest that relying on communication channels without the direct contact from LHW is insufficient to change knowledge, attitudes and behaviour. The IRMNCH coordinator and LHS are themselves concerned about the limited capacity of LHW to reach target audiences.

RDS-II data reinforce this picture. Recall of communications about wheat flour (17%) and ghee (19%) are the lowest of the eight districts canvassed in the quantitative survey; only 6% of the public have unprompted awareness of food fortification, who often link this with fruit (17%) or meat (10%) as well as wheat flour (37%) or ghee (3%). Retailers themselves are relatively well informed compared with elsewhere, 33% associating fortification with flour, 14% with ghee.

7.7 Islamabad

The FFP has gained limited traction thus far in Islamabad. Whilst the IRMNCH coordinator is well informed through the programme training, in which the LHW have also participated, there is no awareness of fortification as a concept among target women and men. For this reason, one mother described the FFP's communication work as having 'totally failed'.

Table 11: FFP Communication Recall: Islamabad

FFP Communication Recall: Islamabad							
	Audience						
	IRMNCH	DMO / SHNS	LHS	LHW	Trader	Women	Men
Sample Size	1	-	-	11	-	10	6
Cable TV	1	-	-	0	-	2	1
Social media / Facebook	0	-	-	0	-	0	1
Mobile text / SMS	1	-	-	0	-	0	0
Awareness session	0	-	-	0	-	0	0
Billboards	1	-	-	0	-	0	0
Brochures	0	-	-	11	-	0	0
Posters	0	-	-	11	-	0	0

The IRMNCH coordinator describes a regular monitoring programme to check the work of the LHS and LHW. LHW take part in weekly training sessions lead by their LHS, covering topics such as breast cancer awareness as well as food fortification. However, none of the women in the research have received a briefing on the subject from their LHW. Despite this both fathers and mothers demonstrate a good basic understanding of the importance of nutrition for child development, if not fortification as a concept, and spontaneously mention the importance of vitamins A and D. They describe using Dalda oil but are unclear whether this is already fortified. No one believes that fortified wheat flour and ghee are currently on sale in the local market or stores.

A rare example of scepticism of food fortification is recorded by both the IRMNCH coordinator and the LHW, who report that some of those briefed believe that some form of family planning control is hidden within the fortified flour, perhaps under the direction of the government to control population size. LHW suggest a more common barrier to behaviour change may be the population grinding its own flour, estimated to be 70% of people within one LHW's area, which limits the prospect of using fortified products.

7.8 Jhelum

Knowledge of fortified foods under the FFP has yet to reach consumer audiences in Jhelum.

Table 12: FFP Communication Recall: Jhelum

FFP Communication Recall: Jhelum							
	Audience						
	IRMNCH	DMO / SHNS	LHS	LHW	Trader	Women	Men
Sample Size	1	9	10	10	-	8	8
Cable TV	1	7	0	2	-	3	0
Social media / Facebook	0	0	0	3	-	0	0
Mobile text / SMS	0	0	0	0	-	0	0
Awareness session	0	7	10	10	-	0	0
Billboards	0	2	0	2	-	0	0
Brochures	0	7	10	10	-	0	0
Posters	0	7	10	10	-	0	0

Understanding of food fortification is highest within the SHNS group, which recalls a recent briefing on the subject from UKAID. The benefits are clear to this group, who recognise Mr Bharpur as the face of fortified food and would expect to see him on wheat flour and ghee. They report much effort has been made in schools, with positive results including parents asking further questions once their children had relayed the concept, but the very limited number of pamphlets etc. provided has acted as a restraint on outreach.

The IRMNCH coordinator and LHS have a good understanding of food fortification, and regularly compare the FFP's campaign with other work promoting iodised salt. The LHW feel less well informed after their briefings from LHS; women say they have met with LHW in their community, but food fortification has not yet been a topic of discussion. Men are unaware and are doubtful of the likely uptake given that they can only afford to use cheap oils.

Recommendations for improving the campaign including providing free samples, simplifying the language of fortification, increasing the number of awareness sessions and making it part of the school syllabus.

7.9 Karachi

The FFP's communication programme in Karachi can be considered successful in increasing awareness and demand for fortified products but, if the target audiences' perceptions are correct, this will soon fall back if such supplies are not available in local stores. This issue was raised spontaneously as the start of the sessions with the IRMNCH coordinator, and the LHS and LHW.

Table 13: FFP Communication Recall: Karachi

FFP Communication Recall: Karachi							
	Audience						
	IRMNCH	DMO / SHNS	LHS	LHW	Trader	Women	Men
Sample Size	1	-	9	12	6	10	10
Cable TV	0	-	1	0	0	0	0
Social media / Facebook	0	-	0	0	0	0	0
Mobile text / SMS	0	-	0	0	0	0	2
Awareness session	0	-	8	12	0	10	3
Billboards	0	-	0	0	0	0	0
Brochures	1	-	8	12	0	10	6
Posters	0	-	8	12	0	10	3

The LHS and LHW all attended the district briefing session, although the documentary video was now shown. LHS and LHW say they have done their briefings thoroughly, which is matched by women's recall of these sessions. Awareness of Mr Bharpur was limited, whereas fortification logos and messaging as a whole were more widely recognised.

An interesting insight was one LHS's description of how attendance at community sessions increased once mothers knew this was focused on their children's health rather than healthcare more generally. Attendance at these sessions grew to 40 or 50 people. The LHW created a 'health house' at which the information was posted, which was spontaneously mentioned later in the women's group. A consistent complaint was not being given enough pamphlets and other materials to distribute to families, which restricted their ability to raise awareness of fortified flour and ghee.

Trade association members appear to be the missing link in the chain in Karachi. They have low awareness of food fortification and its benefits, one saying 'we are hearing the word 'fortification' for the first time in our lives today', and that 'only the rich know the benefits' of fortified food.

Fathers are less well informed about food fortification. Women repeat the LHW reports of a lack of availability of fortified food; one LHW questions whether it is only available at larger stores which are not used by many grocery shoppers, although some in the women's group said they had also looked in the larger stores without success.

Overall a lack of supply, rather than lack of demand, is said to be the main barrier to uptake of fortified food in Karachi. Suggestions for future improvements to the campaign centre mainly on providing more printed materials for distribution to the community.

Data from the RDS-II survey reinforces these findings. Almost one quarter (23%) have a spontaneous awareness of food fortification, amongst whom it is most commonly associated with wheat flour (32%), roti (20%) and oil (7%). 2% link it with ghee. Recall of communications about wheat flour (39%) and ghee (40%), the majority of whom recall seeing it only 'occasionally', are near the average for the eight districts surveyed. The quantitative data suggest that a combination of the high consumption of store-bought unbranded *atta* flour (44%) or commercial flour (20%), along with high levels of awareness amongst these retailers of the fortification of flour (60%), is a key driver of awareness.

7.10 Kasur

The FFP's efforts in Kasur have been broadly successful in laying the groundwork for the use of fortified wheat flour and ghee, although minimal availability of these products limits their uptake.

Table 14: FFP Communication Recall: Kasur

FFP Communication Recall: Kasur							
	Audience						
	IRMNCH	DMO / SHNS	LHS	LHW	Trader	Women	Men
Sample Size	1	10	10	9	10	10	10
Cable TV	0	1	3	0	0	0	0
Social media / Facebook	1	1	0	0	0	0	0
Mobile text / SMS	1	0	0	4	0	0	0
Awareness session	1	10	10	8	0	10	10
Billboards	1	5	0	5	0	10	3
Brochures	1	10	8	7	0	10	0
Posters	1	10	8	5	0	10	0

The IRMNCH coordinator is familiar with the concepts of food fortification, thanks both to FFP and earlier USAID work. LHS have been briefed and this information has passed down the chain through LHW to some of those in both the female and male groups. The benefits of food fortification are widely understood, particularly by those who have been directly touched by LHW outreach, but recognition of food fortification logos is low. This may be partly as the LHW did not share any printed materials, likely due to their lack of availability via FFP.

Traders say they have not received any briefings on food fortification and, whilst willing to stock such products, they do not know whether or not what they current sell is fortified.

7.11 Lahore

The FFP's communication efforts have been relatively successful in Lahore. Most participants in the research have been exposed to the programme's local outreach activities, current use of fortified products is high, and there is further demand for fortified wheat flour and ghee – although Lahoris do not always believe that such products are currently available.

Table 15: FFP Communication Recall: Lahore

FFP Communication Recall: Lahore							
	Audience						
	IRMNCH	DMO / SHNS	LHS	LHW	Trader	Women	Men
Sample Size	1	10	9	10	9	9	8
Cable TV	1	9	0	3	9	1	8
Social media / Facebook	0	6	0	1	3	1	0
Mobile text / SMS	0	0	0	1	0	0	0
Awareness session	1	10	9	9	2	6	0
Billboards	1	10	9	9	3	3	0
Brochures	1	2	9	9	2	1	0
Posters	1	10	9	4	2	1	0

The FFP's training programme has been successful, several participants spontaneously mentioning it in the IRMNCH, SHNS and LHS sessions. Lahore is one of the only locations where broadcast media is cited as an information source and local television stations are mentioned (City 42), perhaps because of its relatively urban characteristics compared with other districts surveyed.

Information on food fortification has passed down the chain via LHS and LHW to female beneficiaries, several of whom recall LHW briefings. Men are notably less aware. Some LHW organised 'nutrition weeks' that focused on food and health. But the challenge of relying on LHW networks is well characterised by the IRMNCH coordinator who observes that, 'we have only 1,600 LHW for a city of 12.5 million people. These LHS and LHWs cannot reach all the people'.

Lahore is one of the districts in which demand is said to be likely to be higher for fortified ghee than for wheat flour, given that the latter often comes from local mills rather than the large manufacturers. Traders themselves show mixed levels of understanding of food fortification, and not all believe such products are available to market. They say that there is no consumer demand for such products, given low public awareness, but they are happy to provide fortified foods to improve public health despite making no extra money from them.

The RDS-II data broadly support these findings. Spontaneous awareness of fortified foods is relatively high compared with the other seven districts surveyed (16%), but still low overall. Among those aware, fortification is as likely to be linked with milk (24%) as wheat flour (25%), and the association with ghee is very low (1%). Wheat flour comes from a mix of sources, most commonly unbranded *atta* flour (31%) or commercial flour (21%). The public's

recall of communications on fortified wheat (27%) and ghee (30%) are below average, although retailer awareness is on a par with the average across all RDS-II districts (33% flour, 3% ghee).

7.12 Layyah

Some of the most positive attitudes towards the FFP's communications are found in Layyah, where five of the seven sessions rated its work as successful.

Table 16: FFP Communication Recall: Layyah

FFP Communication Recall: Layyah							
	Audience						
	IRMNCH	DMO / SHNS	LHS	LHW	Trader	Women	Men
Sample Size	1	8	8	9	8	7	8
Cable TV	0	0	6	0	0	0	5
Social media / Facebook	1	0	0	0	0	0	4
Mobile text / SMS	1	0	0	0	0	0	1
Awareness session	1	8	8	0	0	0	0
Billboards	1	0	0	0	0	0	0
Brochures	1	2	0	0	0	0	3
Posters	1	0	0	0	0	0	0

Only traders have no awareness of food fortification and its benefits, but even here some state that consumers have specifically asked for fortified foods. These retailers believe that they have an important role to play in raising consumer awareness, hence their view that their own lack of knowledge implies a failure of the FFP programme. The IRMNCH, LHS and SHNS groups all attribute what they know about food fortification directly to the FFP, including one of the handful of direct mentions of UKAID across the whole study during the SHNS session.

Women and men both confirm their families are already using fortified foods, many of which include oils such as those with the Dalda or Handi brands in this description.

7.13 Matayari

The FFP has failed to have any impact in Matayari to date. There is little evidence of boosting the capacity of LHS and LHW to deliver information to the community, and no trace of general knowledge about food fortification and its benefits.

Table 17: FFP Communication Recall: Matiari

FFP Communication Recall: Matiari							
	Audience						
	IRMNCH	DMO / SHNS	LHS	LHW	Trader	Women	Men
Sample Size	1	1	7	10	8	9	8
Cable TV	0	0	0	0	0	0	0
Social media / Facebook	0	0	0	0	0	0	0
Mobile text / SMS	0	0	0	0	0	0	0
Awareness session	1	0	0	0	0	0	0
Billboards	0	0	0	0	0	0	0
Brochures	1	0	0	0	0	0	0
Posters	1	0	0	10	0	0	0

The IRMNCH is personally aware of food fortification through his own studies and an engagement with TRDP but is disappointed with the support and follow-up from the FFP. His opinion is that many sessions need to be held and much supporting material provided to have a significant and lasting impact on the local population. He reports that LHS were asked to spread the message through LHW, but that the promised follow-up from TRDP did not happen.

The DMO has not been involved in any briefing session, and no training is taking place in schools during the school holiday. The LHS taking part in Matayari are keen to know more about food fortification and expect it would be beneficial to health, but say they have received no briefings, know nothing about it, and do not recognise the campaign or its logos. LHW echo these themes, explaining that they are keen to spread information about fortified foods but have received no training or briefings beyond a session at the LHS office and being given two posters each for their own study and display. This lack of knowledge filters down to women and men, none of whom are aware of food fortification.

One potential barrier identified by the IMNRCH is that many people prefer to buy their flour from a local mill, therefore food fortification should happen with these organisations as well as with the large suppliers.

7.14 Nankhana Sahb

There is evidence that the FFP is achieving success in Nankhana Sahb.

Table 18: FFP Communication Recall: Nankhana Sahb

FFP Communication Recall: Nankhana Sahb							
	Audience						
	IRMNCH	DMO / SHNS	LHS	LHW	Trader	Women	Men
Sample Size	-	10	9	10	9	9	10
Cable TV	-	0	2	0	1	4	0
Social media / Facebook	-	0	1	0	1	1	0
Mobile text / SMS	-	0	0	0	0	0	0
Awareness session	-	10	7	10	9	9	0
Billboards	-	10	2	0	0	0	0
Brochures	-	10	2	10	9	9	0
Posters	-	10	1	10	9	9	0

The majority of women taking part in this district are using fortified foods, which they attribute to their LHW articulating the benefits – ‘she explained it in a very convincing way’. (Men had no awareness of food fortification.) Unlike in several other districts tested in this research, the growing awareness of fortified wheat flour and ghee is matched by traders making such products available: all say they sell fortified ghee, although none sell flour. In the view of traders, no consumer is aware of food fortification or know the meaning of the logo.

LHS received their training from an FFP partner, and passed on this knowledge to their LHW, who ran ‘nutrition weeks’ and contacted women through door-to-door outreach. All professionals including SHNS recommended that the FFP’s success will be increased through more training sessions for LHS and LHW, a larger volume of printed materials to leave behind with householders and providing free samples of the fortified products. They also caution that change will take a long time in this conservative rural area.

7.15 Peshawar

Peshawar represents a role model for how the FFP’s communication activities are intended to work. Awareness of food fortification is high across all target audiences and there is an unmet demand for fortified products.

The IRMNCH coordinator, LHS and LHW all took part in the district briefing sessions and report that the information presented then flowed down the communication chain. There is a clear understanding amongst expert and lay audiences about what fortified food is, mentioning an alphabet of vitamins, iron and zinc; and its benefits for pregnant women, lactating mothers and children.

Table 19: FFP Communication Recall: Peshawar

FFP Communication Recall: Peshawar	
	Audience

	IRMNCH	DMO / SHNS	LHS	LHW	Trader	Women	Men
Sample Size	1	1	6	8	7	10	8
Cable TV	0	0	0	0	2	5	4
Social media / Facebook	1	0	6	0	4	9	1
Mobile text / SMS	1	0	6	0	0	9	1
Awareness session	1	0	6	8	3	2	1
Billboards	1	0	6	0	3	8	5
Brochures	1	0	6	0	5	2	0
Posters	1	0	0	8	5	1	0

The messages are described as being simple to understand, enhanced by the LHW's ability to couch these in the local language. The FFP's communication success is attributed to the role of the LHW conducting their community outreach, building on existing levels of trust to persuade women of the benefits of using fortified food – '*people trust us blindly*' (LHW). Trade association members are notably enthusiastic, reporting their engagement through public meetings, visits from suppliers, newspaper coverage and the billboard in central Peshawar.

Awareness of Mr Bharpur is mixed, some recalling him from briefing sessions but others not recognising the character. Recall of TV advertising is low among all audiences, partly as some are not regular TV viewers (due to lack of a TV or lack of electricity), partly as there is low recall of the advertisements themselves.

Fortified food more generally is recognised by the packaging and logo. Reported use of fortified food varies by audience: all fathers say that they family uses such food, citing use of 'Family Cooking Oil' or 'Islamabad Oil', whereas all women say they do not use fortified foods due to their lack of availability. This difference may be attributed to a different interpretation of what 'fortified foods' mean, and / or different responsibilities for grocery shopping and food preparation.

The greatest barriers to uptake of fortified food are said to be the availability and pricing of fortified products, rather than an unwillingness to use such foods – although all traders report that they already sell fortified food products. The benefits in tackling nutrient deficiencies and supporting healthier women and children are widely and spontaneously recognised.

Overall the FFP's communication work in Peshawar is rated a success by local participants. Recommendations for improvement include more training sessions for LHS and LHW; more materials, and more copies of materials, to share with the public; and innovative ideas such as a fortified food festival, and free samples of products. The findings here suggest that more work is required to close the gap around awareness of fortified food availability.

Peshawar is the only one of seven RDS-II districts where the data do not directly reinforce the qualitative findings. 9% of the public are spontaneously aware of food fortification, with relatively few linking it with wheat flour (16%) but more with milk (27%), roti (18%), meat (10%) or salt (8%) (note the small sample size for this question). Recall of communications about fortified wheat (24%) and ghee (23%) is relatively low. The environment for fortified wheat to have an impact is relatively positive – only 9% use their own *chakki* flour, compared with 49% using branded *chakki* flour and 37% commercial flour, the highest of any of the districts surveyed – but fewer than one in five traders link fortification with flour (19%), implying that more work needs to be done to recruit them into the promotion of fortified products.

7.16 Rawalpindi

Despite relatively high levels of campaign awareness and fortified food uptake compared with many other districts, no group in Rawalpindi rated the FFP's communication activities as successful.

Table 20: FFP Communication Recall: Rawalpindi

FFP Communication Recall: Rawalpindi							
	Audience						
	IRMNCH	DMO / SHNS	LHS	LHW	Trader	Women	Men
Sample Size	1	4	-	7	-	7	5
Cable TV	0	0	-	4	-	0	0
Social media / Facebook	1	0	-	0	-	0	0
Mobile text / SMS	0	0	-	7	-	0	0
Awareness session	0	4	-	7	-	7	0
Billboards	1	0	-	0	-	0	0
Brochures	1	4	-	7	-	0	0
Posters	1	4	-	7	-	4	0

Knowledge of food fortification among women and men is low, despite some women having attended LHW sessions, although it is universally recognised as positive and a handful of households are already using fortified flour and oil. Their low rating of the campaign is based on their own low recall of FFP communications and little experience of programme messaging. LHW themselves, whilst satisfied with their briefings from LHS and being active in their community, are conscious that awareness exists only where they have actively engaged individuals. They are concerned that they have much ground to cover with limited resources.

The IRMNCH coordinator is confident that awareness will rise, and behaviour change will happen, as it did with for example vaccinations, but this will take time both to reach people and for them to adjust. He is satisfied with the LHW's work and holds monthly progress meetings. The SHNS are very enthusiastic about the storybook aimed at students, and report that their students are equally engaged in the simple messaging.

The RDS-II data broadly supports these findings in Rawalpindi. Spontaneous awareness of food fortification is in line with other districts (7%), among whom it is more often linked with fruit (19%) and salt (16%) than flour (14%) or ghee (10%). Prompted recall of communications about wheat flour (43% and ghee (45%) are relatively high, as is awareness among retailers of flour fortification (61%), but not ghee (0%). Uptake may be partly a function of the relatively high use of bought *chakli* flour (24%) and *atta* unbranded flour (21%) compared with commercial flour brands (25%).

7.17 R Y Khan

Findings from R Y Khan indicate that the FFP is succeeding in laying the foundations for growing the market for fortified wheat flour and ghee, provided the products are made available to consumers.

Table 21: FFP Communication Recall: R Y Khan

FFP Communication Recall: R Y Khan							
	Audience						
	IRMNCH	DMO / SHNS	LHS	LHW	Trader	Women	Men
Sample Size	1	8	8	9	9	10	8
Cable TV	0	6	2	0	0	0	0
Social media / Facebook	0	5	0	0	0	0	0
Mobile text / SMS	0	3	0	0	0	0	0
Awareness session	1	8	8	9	3	10	0
Billboards	1	5	0	0	0	0	0
Brochures	1	8	2	9	0	7	0
Posters	1	8	0	9	0	8	0

The IRMNCH, LHS and SHNS sessions all reference the FFP's work directly in raising their awareness of food fortification, then implemented through LHW. More than 1,700 are active in the district, who are monitored by the IRMNCH coordinator through field visits and monthly meetings. The messages are considered relatively easy to understand, especially once translated into local languages such as Punjabi and Siraki by the LHW themselves. LHW's main concern is that, despite their efforts to conduct door to door influence sessions, the message needs to be repeated regularly to have an impact with target audiences.

The majority of traders say they are aware of food fortification having taken part in FFP-led awareness sessions, and several already sell fortified products. Two participants in the SHNS group recall seeing TV commercials about fortified ghee, but say it was three or four years ago, emphasising the difficulty in assessing FFP recall via qualitative research.

A mix of potential barriers are identified, including the legacy of the polio vaccination conspiracies as well as general concerns around availability and cost. Perhaps the biggest challenge in R Y Khan will be its position as a wheat producer, which leads to many residents relying upon local *chakki* mills to grind their own cereals rather than relying upon flours produced by large mills.

RDS-II data confirm the high use of *chakki* flour, used by 68% of respondents. Spontaneous awareness of food fortification is relatively low (6%), as is recall of communications about wheat flour (23%) and ghee (27%). Retailers in the RDS-II sample are not as well informed about flour fortification as elsewhere, only 16% being aware of these products. They are relatively more likely to link fortification with milk (11%) or salt (10%).

7.18 Sajawal

The process of FFP communication had only recently begun when fieldwork took place in Sajawal, thus it is too soon to evaluate its effectiveness. Although indications are that the dissemination of information is taking place as planned.

Table 22: FFP Communication Recall: Sajawal

FFP Communication Recall: Sajawal							
	Audience						
	IRMNCH	DMO / SHNS	LHS	LHW	Trader	Women	Men
Sample Size	1	1	5	7	6	10	11
Cable TV	0	0	0	4	0	0	0
Social media / Facebook	0	0	0	0	0	0	0
Mobile text / SMS	1	0	0	3	0	0	0
Awareness session	1	1	5	7	6	0	0
Billboards	1	1	0	7	0	0	0
Brochures	1	1	5	7	6	0	0
Posters	1	1	0	7	6	0	0

The IRMNCH, DMO, LHS and LHW have all engaged in information sessions. They have a clear understanding of food fortification and its benefits and are keen to spread these messages to the local population. Parallels are drawn with a successful previous iodine salt information drive. Some innovative methods have been employed, for example using WhatsApp to reach those in remote communities who have smart phones.

Each of these information intermediaries identifies one or more barriers to successful FFP communication. The IRMNCH reports a need for more materials in general, and support to enable LHS and LHW to reach more locations and approach households door-to-door. The DMO has run sessions for headteachers and school students but states he requires at least 1,200 books to brief all schools, way beyond what was provided by the FFP. LHS and LHW echo the IRMNCH's requests for additional materials and support.

Traders fully understand and are supportive of the prospect of selling fortified foods. They report that three sessions were held for them, and that they are displaying logos in their shops. However, parents, both women and men, have little or no awareness of food fortification in general, and of wheat flour and ghee in particular. One woman recalled earlier messages from Save the Children but otherwise there is no knowledge of fortified food, which is matched by no availability of such food stuffs in stores.

Two isolated insights emerge that may be echoed elsewhere. The LHS question whether there the public will expect fortified food to be provided free by government, after their previous experience of receiving free mosquito nets. The traders discuss some of the feedback they have received from religious scholars when seeing the UK Aid branding on the FFP materials, stating that Pakistanis should not be eating imported food, instead families should be producing their own foodstuffs.

Overall the FFP's local partners are positive about the likely impact of food fortification once they have completed their information sessions and food is available locally, but they counsel that, based on their experience with introducing iodine salt, it will take time for local consumers to adapt.

7.19 Tando M Khan

Findings from Tando M Khan can perhaps be regarded as disappointing. Whilst the IRMNCH and LHS are confident that the campaign locally has been a success and that LHW are spreading the messages, the LHW themselves and their target audiences report zero awareness of food fortification and the FFP's work. The reason for this disconnect is not clear from the research findings.²

Table 23: FFP Communication Recall: Tando M Khan

FFP Communication Recall: Tando M Khan							
	Audience						
	IRMNCH	DMO / SHNS	LHS	LHW	Trader	Women	Men
Sample Size	1	1	6	10	7	10	11
Cable TV	1	0	0	0	0	0	0
Social media / Facebook	1	1	0	0	0	0	0
Mobile text / SMS	0	0	6	0	0	0	0
Awareness session	0	1	6	0	0	0	0
Billboards	0	1	0	0	0	0	0
Brochures	0	1	6	0	0	0	0
Posters	0	1	0	0	0	0	0

The IRMNCH had been in his job for only a few days before being interviewed and relied upon information from the previous incumbent for a briefing. He describes his role as arranging meetings and building the capacity to deliver information. It is reported that there is regular follow-up to ensure FFP messages are being passed on, and that these messages are understood because the LHW are good at making them easily accessible in local languages. Similarly, LHS cite the FFP directly: all attended the district launch and can describe the documentary in detail. They recognise Mr Bharpur and can cite the benefits of food fortification, although none are using such foods at the moment and at least one declines to do so due to her family's belief that such foods surreptitiously include birth control. The LHS believe awareness is growing quickly. The DMO, however, has no awareness of the FFP campaign and identifies a lack of communication as the main barrier to the use of fortified foods.

Those LHW taking part in the research had never heard of the term 'fortified food' before and displayed a very low awareness of the concept, its meaning and its benefits. They had not been briefed by their supervisors. Similarly, traders have no awareness although are supporting in principle and attribute the main constraint as being a lack of availability of these products for sale.

² Although LHSs know about the FF through sessions due to some reasons may be LHWs'/LHSs' workload did not allow them to pass on messages to the community in that specific time period.

In both the women's and men's groups there is no awareness of food fortification, and confirmation that they had not been briefed on this by their LHW. There is an appetite to know more about fortified wheat flour and ghee, but the FFP has not gained any traction yet in this district.

7.20 Umar Kot

Umar Kot shows signs of success in raising demand for food fortification products, but it is too soon to assess whether these changes are of sufficient scale or sustainable.

Table 24: FFP Communication Recall: Umar Kot

FFP Communication Recall: Umar Kot							
	Audience						
	IRMNCH	DMO / SHNS	LHS	LHW	Trader	Women	Men
Sample Size	1	1	6	10	7	10	8
Cable TV	0	1	0	3	1	0	0
Social media / Facebook	0	1	0	3	1	0	0
Mobile text / SMS	0	1	6	10	1	0	0
Awareness session	0	1	6	10	1	6	1
Billboards	0	0	6	0	1	3	0
Brochures	0	1	6	10	1	6	1
Posters	0	1	6	10	1	5	2

LHS and LHW both spontaneously cite recent food fortification briefings in CSSP sessions, as do some of the fathers. Most of the women's group are familiar with enhanced wheat flour and ghee, but do not recognise the generic concept of food fortification. LHS and LHW can cite the characteristics and benefits of food fortification, and there is a high level of awareness of the relevant logos despite no knowledge of Mr Bharpur. All the LHS but only one LHW attended the district launch. They consider the messages easily understood by the target audiences.

The DMO is similarly enthusiastic and reports that he is actively pursuing this through the school system, although considers the FFP's translation of 'fortification' as difficult. The IRMNCH coordinator is more doubtful about the campaign's effectiveness, despite his strong support for fortification in this desert-like district. He is concerned that the number of briefing sessions is insufficient to education LHS and LHW, and in turn their local communities; a higher budget is requested.

Traders have not heard of food fortification but support the concept of better nutrition in general. They say that fortified foods are not available in their area, and that low awareness is a further barrier to behaviour change.

Both women and men are familiar with the broad concept and benefits of a healthier diet, having been briefed by community workers, but cannot articulate in detail what this means and why it matters. The women described having been steered towards buying flour from specific mills and considered it to be of a better quality. Three in ten are regular users of fortified products.

Overall it seems that Umar Kot is on the path to greater use of fortified foods but concerns about availability and awareness remain. Of note is that one of the LHW mentioned lactating women as a target audience for food fortification, which is rarely mentioned in any of the qualitative sessions – most expert audiences refer to children and pregnant women only.

8 Additional comparison with RDS II

8.1 Awareness of fortification

According to RDS-II, top-of-mind awareness of fortification among respondents was 11.2%, of whom 26.8% spontaneously mentioned wheat flour as a food that was fortified (highest out of all foods mentioned) and when asked which foods were fortified, and 3.2% and 2.8% mentioned ghee and cooking oil respectively.

8.2 Product Availability

Findings from RDS-II confirm that there is a sharp difference between supply of wheat flour and oil/ghee. For oil/ghee, coverage is good, with around 85% of consumers purchasing a fortified brand. For wheat flour, however, data from FFP's Fortis database reveals that only 12 -14% of total output of signed up mills is currently fortified. RDS-II found a negligible number of fortified wheat flour samples available at retail outlets.

8.3 Price sensitivity

RDS-II found less evidence of price sensitivity with about 78.5% of respondents indicating their willingness to purchase fortified wheat flour even at a cost higher by PKR 1 per kg than the unfortified alternative, and 81.6% willing to buy fortified oil/ghee if it was priced PKR 1/kg (or litre) higher. Low price sensitivity was seen across all income levels, though with higher quintiles showing even lower sensitivity for wheat flour only.

8.4 Source of Information

RDS-II suggests that TV has played some role in creating awareness of fortification, being the most important source of information (49.1% for wheat flour and 63.5% for oil) for the 11.2% of respondents who were aware of fortification. Hafizabad, which had no TV adverts, had substantially less awareness due to TV (16.7% for wheat flour and 29.2% for oil).

Furthermore, awareness due to LHWs was uneven across districts, as the qualitative findings suggest, ranging from 0 to 12.5%.

9 Discussion and Conclusions

This section of the report pulls together the common themes and patterns in the research. The FFP's Terms of Reference for this research set out seven 'questions to answer' (refer to section 2) that provide a useful framework for discussion of the findings.

In a handful of locations, the market is evolving well, with consumer awareness raised and traders growing the supply of fortified wheat flour and ghee. In a minority of districts, the FFP has failed to gain traction thus far, with low consumer awareness and no knowledge of fortification amongst retailers. In the majority of areas surveyed there are signs that the FFP's communication effects are building but the overall uptake of fortified foods is restricted by limited awareness, little or no supply and concerns about costs for the poorest households.

This large-scale qualitative study indicates that the potential for the FFP's work to be successful is high: there is latent demand for fortified foods, little negative response from target audiences provided the cost is palatable, and an enthusiastic network of LHW who are willing to help catalyse demand. Elements of the communication programme are working in several districts but judging by the participants' perceptions there is still much work to be done on raising awareness and improving the availability of fortified products.

The key conclusions drawn from the research are shared as follows

1. LHS and LHW are the key channels through which public awareness and understanding is raised. In most of those districts where these groups have been active there is evidence of target audiences of women and men have a good understanding of the nature and benefits of using fortified foods, even if the term 'fortification' is not used *per se*. Those LHS and LHW who have been briefed show a good understanding of what is added to fortified food and why; the benefits are generally expressed by consumer audiences in more general terms of 'strength', 'energy', 'growth', rather than specific additives. There are no specific patterns of when and where LHW briefings take place. The greatest barriers to spreading the message further are:
 - The general awareness of food fortification among LHW – in two districts they say they had little or no briefing
 - The resources and reach of LHW themselves. Food fortification is only one of the themes they are expected to discuss, and they are concerned that their micro-level community work can only reach a certain number of households in the time available. Limitations were also identified in the assumption that launches and training should be held only once in a district, given the complexity of the material and the importance of repetition to embed changes in behaviour. The LHW pass on all of the messages with which they have been briefed, they often adapt these messages to be more accessible to their target audiences.
 - The volume and, to a lesser extent content, of the FFP's publicity materials is regularly criticised. For example, LHWs want sufficient pamphlets to be able to leave one with every household, rather than being given just one or two posters to display within the community
 - Additionally, in a handful of districts the IRMNCH leader specifically asks for extra financial resources to improve the outreach of LHW
2. There is little evidence that such messages are being passed on by traders etc., not least because the large majority of traders are themselves not aware of food fortification. In only half of districts do traders say that such products are available for them to resell, and in some cases, they do not know whether their

own products are fortified. This reported lack of availability of fortified food is the biggest hurdle to the FFP achieving its objectives.

3. Qualitative research is not statistically representative, and care should be taken when interpreting any of the numbers presented in this report. In addition, few 'show materials' were used as prompts in the research, for example recall of the TV commercials was tested without showing the commercial itself.
4. Despite these caveats, the convincing finding of this research is that the work of LHS and LHW is the key driver of changes in knowledge and attitudes. Many of the district launches were useful in deepening the understanding of IRMNCH coordinators and LHS, and sometimes LHW or traders, but there is little trace of the broadcast or mobile messaging activities having any impact. Reported TV viewership suggests that local cable TV channels are relatively unpopular and unlikely to reach a large audience.
5. Changes in behaviour will be a function of availability, cost and perceptions of the relative benefits versus cost. At the moment, in most districts it is reported that there is no availability and no knowledge of the price of fortified wheat flour or ghee.
6. As explained the work of LHS and LHW is the key driver in shaping awareness and attitudes. In most districts it is reported by consumers that fortified foods are not available, and therefore behaviour has not changed.
7. A significant finding of the research is how almost all participants have a positive response to food fortification, even if they have not encountered the concept before. When prompted it was commonly agreed among all audiences that malnutrition is a problem within their community, and when the benefits of food fortification were explained almost all agreed that – providing barriers of availability and cost were overcome – they would be willing to use fortified wheat flour and ghee. Only a handful of the hundreds of participants in the research spontaneously raised concerns over the origin and purity of fortified foods, or the objectives of the UK as a sponsor. The most frequent concern is that this is a cover for birth control.
8. There is some awareness of the FFP's logo among LHW and LHS groups, but little among consumers. Knowledge of more generic ways of identifying fortified foods, looking for these words on the packaging, is a little more widespread. However, the research confirms that, if such logos were more widely known and combined with better awareness of food fortification as a whole, they would be successful in promoting fortified wheat flour and ghee.
9. Testing of the campaign content was limited to those materials that participants had themselves encountered and remembered – posters and pamphlets for LHS and LHW, plus storybooks for DMOs and SHNS. There is little detailed recall of specific campaign messages, discussion instead focusing on prompted awareness of the need for food fortification and what it involves.
10. The posters and pamphlets were well received by health professionals and provided useful information for them to pass on to lay audiences. However many explain that they further translate the messages to be more accessible for less literate audiences, both literally (as materials were not always provided in the local language for those who can read), and metaphorically (some phrases such as 'fortification' were sometimes described as hard to understand or poorly translated for these groups).

10 Lessons Learnt and Recommendations

The purpose of qualitative research is to inform and guide decision-makers rather than provide direct answers and recommendations. However, drawing upon the findings of this research and Accadian's own experience in the design and delivery of development communication programmes in Pakistan and elsewhere, we can make clear suggestions that arise from the findings. These include:

1. Ensure that products are available within each District, and that both large and small retailers are engaged in their supply. Understand the shopping patterns of all consumers, and the extreme price sensitivity of the poorest and most vulnerable beneficiaries
2. Given the effectiveness of the work of LHS and LHW thus far, boost the FFP's engagement with target audiences through this channel, and ensure that a much greater volume of materials (pamphlets etc.) are provided for door-to-door outreach. Evaluate the benefit of repeated training and communication activities to better embed behaviour change. Consider ways of incentivising LHS and LHW to focus on fortification. Recognise their association with family planning / birth control and correct this misperception
3. Consider expanding the role and profile of SHNS, who themselves say they can make a significant impact on raising awareness within families
4. Review the activities being delivered through other communication channels, given that the qualitative data here imply they are not effective at reaching target audiences. Access quantitative media consumption data to better understand what media people are consuming and when; assess whether using Cable TV provides value for money when trying to reach target audiences. However, qualitative findings recommend preferring news channels such as GEO, ARY and Express rather than entertainment or local cable stations. The picture in Lahore is a little different given the vibrancy of local media, but overall consumption of cable TV is low.
5. Continue to test and refine future materials before deployment to ensure they are understood and liked by target audiences and provoke the intended changes in behaviour. Check for appropriateness of languages used, translation of technical terms, and comprehension
6. Appoint an individual in each district who has direct accountability for campaign delivery. Continue robust monitoring and effectiveness activities at the district level to track links between LHS, LHW activity etc. and changes in knowledge and behaviour. Support IRMNCH in building monitoring frameworks. Help LHW better manage the competing demands on their time
7. Review how the FFP and its representatives are working with trade associations and retailers etc., to boost their awareness of and willingness to sell fortified wheat flour and ghee. Recognise that reports of (lack of supply) of fortified foods is either a problem in reality or a problem in perception and understanding; change either the reality or the perception
8. If there is a mismatch between communication activities and product supply, confirm that the latter is in place before launching local communications

