

Behavioral Themes

Salience, endorsements,
tangibility, planning

Sector

Maternal child health

Project Type

Field and lab experiments

Sample Size

1,150 participants



Improving the uptake and adherence of iron folic acid (IFA) supplements

Photo credit: Blake Barlow





Photo credit: Theodore Goutas

Can we improve adherence to IFA pills among pregnant and lactating women?

Anemia is a pervasive public health problem in India, with 53% of women aged 15-49 years being anemic. It is estimated that 20% of maternal deaths are anemia related and the condition can cause low birth weight and cognitive issues for children. In order to address this concern, there is a strong commitment from the Indian government to reduce anemia prevalence amongst pregnant women and adolescent girls. In partnership with the Centre for Social and Behavioural Change (CSBC), Busara worked on narrowing down and refining interventions aimed at driving uptake and adherence of IFA pills amongst pregnant and lactating women in India.

A behavioral science approach

Adherence to a (sometimes difficult or painful) regimen is subject to a number of behavioral barriers. The WHO estimates that adherence to long-term therapies in the general population is around 50% in developed economies, and is likely much lower in developing countries.

People's tendency to have limited attention, to discount the future heavily in favor of the present, and to overweigh the potential risk of side effects all factor into low adherence rates. We also know that small changes to factors such as self-efficacy and perceived control appear to strongly correlate with improved adherence, indicating that there may be strong psychological drivers that can be leveraged.¹

This project aimed to explore how a behavioral science approach might lead to more effective design of interventions to support adherence to IFA pills for childbearing women.



**53% of women
aged 15-49 years
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**20% of maternal
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1 <https://apps.who.int/medicinedocs/es/d/Js4883e/6.2.html>

Interventions and Findings

Outcome - Understanding and Valuation

For the first set of experiments we had two primary outcomes:

- 1. Understanding** - we asked participants a series of questions evaluating their understanding of the side effects, measures for avoiding them, and the relative ease of getting sufficient iron from non-supplementary needs.
- 2. Valuation** - we asked participants to contribute their lab earnings to a IFA public good fund. This fund was framed as a public health for their community that would support women in getting access to IFA pills. By measuring their willingness to contribute it allowed us to get a concrete, continuous measure of their value of the supplement.



Counselling card

Women are provided with information on the side effects associated with IFA pills

In this experiment, we wanted to test whether visual representations of the potential side effects could reduce the perceived risk among women. Further, we wanted to explore whether an endorsement of the treatment by an authority (i.e. doctor) might further reduce perceived risk.

Control: ASHA explanation of side effects only

Treatment 1: ASHA explanation of side effects + images visually representing those side effect

Treatment 2: ASHA explanation of side effects + visual images of side effects + doctor endorsement.

Findings: Visual images are more memorable and increased the recall and comprehension of information shared. Participants in this treatment were 8% more likely to recall the information that they heard, compared to the control group. The doctors endorsement appeared to cancel out the positive impact of the simple image.





Food equivalency

Women are provided with information on the food equivalency of IFA pills

In this experiment, we wanted to test whether visual representations of the potential food inputs required to meet iron needs could increase valuation of the IFA supplements. We selected foods that were common in the diet in the sampled areas to make it more relatable.

Control: Standard information on IFA pill benefits

T1: Information on IFA benefits + Graphics of food equivalency with accompanying audio

Testimonial Video

In this experiment, participants were exposed to either a standard government information video describing the benefits of IFA supplements or a more personalized testimonial video of a woman who had used IFA supplements.

Control: Standard Government Video

T1: Testimonial Video



Findings: Showing the food equivalency increases the value perception of IFA pills. Surprisingly, it does not alter the perceptions of food substitution, i.e. women still believed that you can get enough iron from food, even without IFA pills.



Testimonial Video

Women are shown a video of a woman they can relate to, talking about IFA pills

In this experiment, participants were exposed to either a standard government information video describing the benefits of IFA supplements or a more personalized testimonial video of a woman who had used IFA supplements.

Control: Standard Government Video

T1: Testimonial Video



Findings: Testimonial videos are just as effective as standard government advertisements, in terms of recall and IFA pill perceptions.

Outcome - Adherence

For the second set of experiments we had the following outcomes:

“Before you leave, we would like to invite you to participate in another task, that you can easily do from your homes, and for free. We would like you to missed-call/flash a specific number. The goal in this task is to see if you are able to complete this task every day for the next 20 days.

Here is the number for you to missed-call/flash. If you missed-call/flash this number over the next 20 days, you stand a chance to earn 5000 INR. Of the people who missed-call this number, some will be randomly chosen to receive 5000 INR. For every day that you missed-call this number, you increase your chances of receiving the 5000 INR.

This missed call was intended to simulate remembering to adhere to a regimen on a daily basis, and was used a proxy measure in our lab experiment.



Calendar

Women are provided with a calendar to track their daily IFA pill usage

In this experiment, respondents were given a tracking calendar that they could hang up in their homes to serve both (a) as a salient reminder of their intent to dial the missed call every day over the 20 days, and (b) to demonstrate their progress towards the final goal.

Control: Standard script explaining the bonus from dialing the missed calls.

T1: Take-home calendar to track progress.



Findings: Having an interactive daily tracking tool increases adherence by 14%.



IVR

Test to see if an IVR call increases pill adherence

In this experiment, respondents were called daily with a short interactive-voice-response service that either (a) had a simple reminder of the daily-missed call obligation, or (b) introduced a the reminder in advance of a radio soap opera that had 20 days of episodes that aimed to provide a more entertaining complement and hook to encourage participants to use the service.

Control: No IVR call

Treatment 1: IVR Reminder call + Soap Opera

Treatment 2: Reminder IVR call

Findings: For the small sample that we were able to reach via IVR, the calls made little difference to adherence levels and whilst cheap, it is difficult to administer for this group.



Discussion

Visual information most effective when simple

The counselling card intervention was effective at increasing recall and comprehension of the information shared. Interestingly, the effect wasn't nearly as strong in Treatment 2 where an image of doctor endorsement was added; this might be because people who saw this image suffered information overload which inhibited their recall of the information they listened to. Health information should be simple and relevant, with key elements clearly communicated to enhance recall and long-term salience of the information.

Equivalency changes valuation but not beliefs on alternatives

Although the food equivalency images worked to increase women's value perception of IFA pills, the additional information did not alter correcting beliefs on substitution, with women who received the information on food equivalency believing that it is easy for pregnant women to get enough iron from food if they don't take IFA pills at a similar rate. Further work could be done to help us understand these mechanisms.

Testimonials were surprisingly less effective, but unclear why

When comparing the effectiveness of testimonial videos over TVCs we found that women responded similarly in terms of recall and IFA perceptions. The findings suggest that perhaps the respondents were inattentive and/or disengaged from the message and therefore did not recall the information they heard. Pre-testing would need to be done in future to determine which messages the audience appears to engage with.