The Sociocultural Drivers of Food Choices

Formative research among pregnant and lactating women in Rajasthan

Eva C Monterrosa
Sr Scientific Manager, Sight and Life

Key messages

- Addressing maternal undernutrition is not just about the nutrient profile of the foods women eat; it also requires an understanding of the social norms and beliefs that guide eating practices during pregnancy and lactation.

- Pregnant and lactating women (PLW) in Rajasthan consume on average 30% less than the Indian Medical Research Council’s recommended intakes for calories and for protein in the third trimester of pregnancy or during exclusive breastfeeding.

- Formative research was conducted to identify how key social influencers shape the decisions of PLW in Rajasthan on what and when to eat and to understand important barriers to healthy eating during pregnancy.

- Food taboos tend to be propagated by mothers-in-law (MIL), whereas husbands may be more accessible to dietary advice in respect of their wives, not least because of the cost of medical care in the event that they fall sick.

- Key insights of the research are that improving food intake is feasible through non-main-meal occasions, that women need permission to eat more during pregnancy and lactation, and that actionable dietary advice needs to be relevant, specific, and desirable.

Pregnant and lactating women (PLW) have higher calorie, protein and micronutrient needs than other women. These increased nutritional needs can be met through various changes in eating habits during pregnancy and lactation. For example, to increase calorie and protein intake, women can increase food portion sizes, choose foods with more calories, with more of those calories coming from protein, or eat more frequently. Nutrient density can also be achieved via these strategies, as well as by choosing food with a higher nutrient content. For some nutrients (e.g., iron and folic acid), simply eating more food will not cover nutrient needs, so a supplement is required. However, addressing maternal undernutrition is not just about the nutrient profile of the foods women eat. It is also about understanding their eating culture and the social norms and beliefs that guide eating practices during pregnancy and lactation.¹

Maternal nutrition is critical for fetal growth and development² and for optimizing nutrient levels in breast milk.³ In contexts with high prevalence of maternal undernutrition, such as Asia,⁴ the need for scalable strategies to improve nutrient intakes among PLW is an urgent priority. In India, 35.6% of women of childbearing age⁵ have a body mass index below 18.5 kg/m², and women who are below this level are considered undernourished. The Anganwadi system addresses maternal nutrition status during pregnancy and lactation through a take-home ration, either as a ready-to-prepare or hot-cooked meal for the PLW.

In 2017, Sight and Life partnered with the Children’s Investment Fund Foundation (CIFF) to examine the sociocultural drivers of food intake among PLW in Rajasthan through formative research. At the same time, CIFF also commissioned an Opti-foods study to the Indian Institute of Health Management Research (IIHRM) to better understand how the nutrient gap could be filled through the existing food system. Analysis of the dietary recall data showed that PLW in Rajasthan dietary intake is approximately 30% lower than what is currently recommended by the Indian Medical Research Council for calories and for protein in the third trimester of pregnancy or during exclusive breastfeeding. The nutrient gap is even more pronounced than the calorie and protein gap, with the recommendation for fat, calcium, iron, zinc, vitamin A and vitamin C falling 50–70% below the ICMR (Indian Council of Medical Research) recommended levels in the third trimester of pregnancy. According to Opti-
foods, these gaps could be reduced if women were to consume pulses, vegetables, and milk on a daily basis, and to increase their weekly consumption of fruit and eggs. These dietary recommendations, however, would still not meet calcium, vitamin A, and iron intakes during pregnancy. Affordability of this diet is a genuine concern because pulses, vegetables, fruit, and eggs are purchased as often as the household economy allows.

Even if it was affordable to meet the dietary recommendations outlined in Optifoods, we do not have the social evidence (a) on whether it is acceptable and practical to eat 600 extra calories of nutrient-dense food per day; (b) to what extent women are motivated to eat more of the same food; and (c) to what extent women and their influencers understand the benefits of eating more. Of relevance is the highly gendered eating context in Rajasthan, with various gatekeepers monitoring women’s food access, and women often the last to eat. Also, the acceptability of food recommendations is influenced by beliefs about foods and their impact on pregnancy and milk production and quality. These factors together influence how and where and what one communicates to motivate a change in dietary practices among PLW in Rajasthan.

The objectives of the formative research were to:
1. Identify how key social influencers shape PLW’s decisions on what and when to eat;
2. Identify the benefits / outcomes that are most valued by women during pregnancy and breastfeeding;
3. Discover the most appropriate vocabulary to describe these benefits / outcomes; and
4. Understand important barriers to healthy eating during pregnancy.

We report a summary of the formative research findings and their implications for behavior change intervention to improve nutrient intakes among Rajasthani women.

Methods
Study design. We followed an emergent approach to the research, whereby new lines of inquiry were pursued based on the data emerging from the interviews and observations. Debriefing calls were held biweekly with project partners to hear insights from the field team and discuss whether any adjustments to content of discussion guides or data collection methods were required for the subsequent field site.

Setting and participants. We selected four districts that reported 50% female literacy. In the east we selected Tonk, located in a semi-arid region. Pali, in the mid-west, is located in a semi-arid, sub-humid region with below-average rainfall. In the South we selected Udaipur, in a humid region, and Baran in a very humid region, both with average rainfall. Baran district has at least 20% of the population as scheduled tribes and castes. All participants sampled were from low-income communities. We used a convenience sampling approach (Table 1). Women were excluded from participating in this study if they were illiterate. Eligible participants were married women and had at least one child, or were expecting their first child. We sampled a broad range of participants, from women living in nuclear homes to those in multi-family homes; women with a university degree to women who had low literacy levels.

Data collection methods. Kantar TNS, a market research agency from Gurgaon, was hired to conduct the formative research. Data collection occurred from February to March 2017. In-depth interviews were conducted with PLW. A variety of interview techniques was used to elicit responses, including open-ended questions, concept testing (different types of dietary advice; positive or negative outcomes related to eating more in pregnancy and lactation; Sita-Gita story about twin sisters that are expecting), and evaluation of images of women. In these same communities, we conducted home observations
with PLW, focus group discussions (FDG) with MIL, husbands, and frontline workers (FLW) (Table 1).

Data analysis. Transcripts were translated to English and underwent content analysis by a TNS. A research specialist based at the University of South Carolina conducted an in-depth text analysis of the English transcripts with ATLAS.ti software (v.7, Germany) to identify factors that affect food access and eating norms in this sample of women. The text analysis was a mix of pre-defined and emergent codes. The pre-defined codes were taken from a review of the literature that revealed that Indian women's eating practices are influenced by social support networks, beliefs about food (i.e., taboos), access to information, biological factors (i.e., appetite, life stage), and personal factors (i.e., preferences, emotional wellbeing, confidence/self-efficacy, and status in home).

Results
The PLW in our sample were relatively young and on average women in our sample had completed primary school (Table 2). The median number of family members (excluding the PLW) in the households was 6 and the inter-quartile range was 3 and 8.

We identified 19 factors that drive food choices in this sample of pregnant and lactating Rajasthani women (Figure 1). These factors act at various levels, from the individual to the sociocultural, interacting in multiple and complex ways. The results described here are organized around key insights. For each insight, we begin with a brief explanation of why this line of questioning was pursued, then we present evidence from the formative research that supports the insight, and we conclude by identifying the implications for programs.

Insight A. Improving food intake is feasible through non-main-meal occasions
Typically, practitioners give dietary advice that centers on foods consumed as prepared meals. In Rajasthan, the calorie and nutrient gap between current and recommended intake is quite large. To explore the viability of meal-based dietary advice to cover the nutrient gap, we examined the PLW and household eating and meal patterns, as well as eating norms.

Evidence from formative research
The typical eating patterns for these communities consisted of two meals, one late morning and the other between 6 and 7 pm,

<table>
<thead>
<tr>
<th>Data collection methods</th>
<th>District</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Udaipur (urban)</td>
<td></td>
</tr>
<tr>
<td>Interviews (PLW)</td>
<td>5</td>
<td>23</td>
</tr>
<tr>
<td>Observations (PLW)</td>
<td>2</td>
<td>8</td>
</tr>
<tr>
<td>Focus Group Discussions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(n=8–10)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Husband</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Mother-in-law</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Frontline workers</td>
<td>1</td>
<td>4</td>
</tr>
</tbody>
</table>

Table 1: Sample size description for data collection based on district and respondent-type

PLW: Pregnant and lactating women. ASHA: Accredited Social Health Activist; AWW: Anganwadi worker; ANM: Auxiliary-nurse midwife

Table 2: Sociodemographic characteristics by location

<table>
<thead>
<tr>
<th>Location</th>
<th>Mean age of PLW (years), (SD)</th>
<th>Mean years of schooling (years), SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Udaipur</td>
<td>25.7 (2.6)</td>
<td>9.7 (3.0)</td>
</tr>
<tr>
<td>Baran</td>
<td>22.8 (2.1)</td>
<td>9.4 (3.3)</td>
</tr>
<tr>
<td>Pali</td>
<td>24.9 (3.6)</td>
<td>8.1 (3.3)</td>
</tr>
<tr>
<td>Tonk</td>
<td>24.3 (3.2)</td>
<td>9.6 (1.6)</td>
</tr>
<tr>
<td>Overall</td>
<td>23.6 (3.0)</td>
<td>8.8 (3.0)</td>
</tr>
</tbody>
</table>
and a tea taken at home, early in the morning. These meals consisted of chapatti, vegetables and/or dal, which is lentils cooked with soup-like consistency and made with spices. Morning teas (prepared with milk) could be taken alone, or with toast, biscuit, or left-over roti from the previous evening meal.

Maternal diet is described using Passim and Bennett’s food classification of core, secondary core, and peripheral foods (Table 3).

Eating occasions outside of meal times were variable in their practice: an afternoon tea, or drinking milk, buttermilk/lassi/abadi [buttermilk with cereal (corn or pearl millet)] or eating a fruit at mid-morning or sometimes in the afternoon. These foods taken outside of mealtimes can be characterized as small, single-serve portions, and in many cases are prepared or bought and then stored for family consumption. PLW with greater opportunities for non-main-meal occasions were those who a) were the homemaker; b) had a young child, because they could eat the treats or fruit bought for the children; c) lived in a single-family home.

Eating norms revolve around shared foods, mostly through shared meals. Eating food by oneself or for oneself is un-acceptable behavior. “It does not look good also that only I sit and eat. I will cut one apple and give her [sister-in-law] half and have half myself.” PLW did not consider it normal or appropriate to eat more food than others at meals, especially because it challenged their notion of a good wife, a good daughter-in-law, and a good mother. Thus, dietary advice for a PLW would have to “apply” to all household members. For example, if a PLW is advised four small meals per day, this advice would mean increasing household food expenditure. As one husband noted, “if she is eating four times, then the rest of them [family] are also eating four times. So for that you have to earn a lot.”

“PLW did not consider it appropriate to eat more food than others at meals, because it challenged their notion of a good wife, daughter-in-law, and mother”
Food access is determined by the position in the home, and autonomy to leave the house and make food purchases. Because of their earning power and freedoms to travel independently, men buy food, and male food preferences often influence what is prepared at meal times. PLW cook the food and may recommend what to buy when food stocks are low, but normally the PLW is not responsible for food purchases. The MIL, as the manager of household food resources, decides what to prepare, when, and who prepares the meals. She may occasionally buy the food. PLW need direct permission from the MIL to prepare foods (lighting a fire or the stove) and to eat foods in the kitchen.

PLW longed for the freedoms of their maternal home, where they could consume whatever they wanted. “At maternal home, I used to have [fruits] daily and there was no tension. Here, there is irritation.” Thus one can infer that women with the lowest autonomy are likely to be newlywed, 17–25-year-old, primipara living in multi-family households.

When financial resources were scarce, a PLW prioritized others’ needs over her own. “If everything is okay at home then I will take for myself, but if there is need at home, then I will use it for my house.” In multi-family homes, competition for food resources was evident. “Sometimes apples come home for me, as the doctor has told me to have them. But my sister-in-law will snatch them, saying, ‘I do all the hard work and she [PLW] gets to eat apples’.”

**Implications for nutrition interventions**

In this context, there are various barriers to a meal-based dietary recommendation. Another pathway to explore might be non-main-meal occasions (or snacking occasions), given that they align with existing norms and eating practices for women. First, most non-main-meal foods do not require a stove/fire, so permission from the MIL is not explicitly needed. Also, “not having to cook” means that one does not take time away from other chores to prepare and eat these foods, creating less friction between the PLW and the MIL. Second, foods consumed outside of meals are often “snack size”, a small, single-serve portion, which aligns with the belief that to avoid lethargy, women must consume small amounts of food (see Insight C). Third, recommending foods that are already prepared or bought and then stored for family consumption, which women have access to, may alleviate guilty sentiments of having scarce resources diverted to the PLW and not to others.

**Insight B. Women need permission to eat more during pregnancy and lactation.**

Given the limited autonomy of low-income Rajasthani women, food-sharing practices, and financial possibilities of families,
women require permission from gatekeepers to act on dietary advice. We examined the permissiveness of husbands and MIL for granting food access.

Evidence from formative research

There are certain cases when women are granted permission to consume foods only for them. One example is when the doctor prescribes foods as treatment. For example, when pregnant women are diagnosed with anemia, they are advised to eat fruit or take supplements, or when women show inadequate weight gain, the doctor’s prescription may include a protein powder to be taken with milk. Another case when women are granted permission is when pregnant women “crave” a sweet treat or fried food. In both the medical and craving situation, it is the husband who buys and sanctions eating such foods, within the limits of household finances.

In our sample, the husbands exhibit behaviors of being the provider, protector and a medium to the outside world. Our data show that he is, at times, warm, appreciative, and does things to gain her affection, though on the sly, satisfying her cravings or buying treats like kachori or pakora. Women expressed that they found the occasional smuggling of food by the husband exciting and romantic. Husbands are balancing the demands of the patriarchy with being more emotionally available to their wives. While household food management is still a woman’s domain, men were eager to know the links between foods and better health, given that they pay for medicine and doctors. “They do not tell us of such advice and then when things go wrong we need to spend.” PLWs also discussed the ways in which husbands support them:

“Yes, even he [husband] takes care of me a lot … During my first pregnancy, he was not always there with me, but now during my second pregnancy he was always there all the time … He took me to the Jodhpur hospital and we did all the tests on time. He took care of my food also.” (Lactating mother, Pali)

“He scolds me, and tells me to eat this and that … If I don’t eat food on time he scolds me because I haven’t eaten food or had milk on time.” (Pregnant woman, Udaipur)

In contrast to the husband, the MIL tends towards restricting food access, but this restriction is related to food beliefs and pregnancy. The MIL is concerned about a “smooth delivery” and avoiding the need for C-section, so MIL encourage eating down in the last trimester and avoiding sticky foods (bhindi, banana, ghee, okra) because these are thought to make the baby stick to the womb. MIL were adamant that pregnant women should remain physically active (continue doing housework or field work) to ensure an easy delivery. MIL with a more “traditional view” thought that today’s pregnant women were too delicate and “required” too many luxuries, such as special food (protein powder and milk) and rest.

“The MIL tends to restrict food access on account of food beliefs and pregnancy”

Implications for nutrition interventions

Dietary advice given only to women has a very low likelihood of having an impact on a PLW’s dietary intake. Advice must also be given specifically to gatekeepers, such as MIL and husbands, so they can understand and sanction any dietary changes. Husbands, in particular, are a promising route for improving food access, because a husband is the woman’s link to knowledge resources and food access. Furthermore, husbands offer an avenue for emotional support and care to PLW, but may be reluctant to do so if it means openly defying their mother’s authority in food and household management.

Insight C. Actionable dietary advice is advice that is relevant, specific, and desirable.

PLW discussed the type of diet advice received by FLW, and FLW shared the advice they provide to the women and sometimes the MIL. The current advice in pregnancy centers on meal-based foods (dal, green leafy vegetables, four small meals), milk, and fruits.

Lactating women did not report having received any specific dietary advice from the FLW. After giving birth and during the first 40 days post-delivery, it is customary for women to take rest from household or field work and to consume a special diet...
consisting of ladoos (macaroons made with ghee, almonds and dried fruit). During this time, the PLW is often isolated from the rest of the family and remains under the care of the MIL (or mother, if she has travelled home to deliver), who supervises the foods consumed by the PLW.

We also tested various concepts to understand the relevance and motivations for dietary changes.

Evidence from formative research

Perceived Relevance of dietary advice. It should be noted that pregnancy is perceived as a normal state of womanhood. “All women get pregnant, why should it be considered special?” We also found no measurable increase in dietary intake between the pregnant and non-pregnant state. “I will eat as much as I can, what’s the point of extra eating?” Moreover, the main preoccupation for a pregnant woman is to deliver her child alive and “healthy”, so dietary changes (or lack thereof) are motivated by the wish to avoid miscarriage, stillbirth, complications at delivery, and maternal death. The food taboos common among PLW are related to these fears. When asked about eating larger portions, women did not perceive themselves as eating small portions.

“Food taboos among PLW are motivated by the wish to avoid miscarriage, stillbirth, complications at delivery, and maternal death”

In lactation, a key motivational driver is boosting milk production and recovering the PLW’s strength post-delivery. During the 40-day rest period, women generally consume one meal per day: roti with ghee alone or roti and green vegetables, and dal is consumed frequently, 2–3 times a week. In between meals, lactating women consume significant amounts of ladoos and some may consume halwa or dalhiya. Lactating women avoid heavy foods and sour foods (buttermilk, curd) to prevent colic in the baby.

We found that the MIL readily referenced practices to prevent loss in pregnancy and the food restrictions during lactation were related to the child’s health or the mother’s recovery from childbirth. These ideas represent the traditional view. We can infer from the data that PLW living in rural areas and PLW with less education are more likely to rely on food beliefs in support of dietary restrictions. PLW are fearful when they (or a close relative) have had a previous experience with miscarriage or other complications in pregnancy.

Personal desires. We asked PLW to comment on images of other women (this was one of our interview methods) to discuss their aspirations for the future. Women expressed a desire to be more independent and contribute to the family income, and aspired to the betterment of their children. They also wished to learn new things. “I feel I could have also studied till the 10th [grade]. Maybe now I could have studied further... If you study more, your GK [general knowledge] increases and you become more aware... I could probably have brought up my children in a better way.”

Specificity of the advice. In the formative research, we tested various dietary concepts framed as loss (weak child, weak milk) or gains (strong child, strong milk, good diet). The concepts that were perceived to be most relevant were the ones with a tangible positive benefit (gain) for the child, along with learning new information. Ideas that resonated well, as judged by expressions of body language and positive comments, were:

> Children’s brain, blood, bone and eye development mostly happens around three months before birth.
> Doctor-recommended food helps the woman stay healthy and strong. This helps her take better care of her family and child.

When our research staff shared only generic dietary advice, PLW justified their current food choices by citing the importance of eating-down, food taboos, or the scarcity of food.

Implications for nutrition interventions

Dietary advice has higher action efficacy among better educated women, particularly among women who have the financial resources to act. However, it appears that among this sample of low-income women, technical and new dietary suggestions coupled with child development milestones seem to pique in-
Pregnant woman showing coconut she keeps in a shiny steel jar, tucked behind the plastic containers. Her husband buys this for her. “This is only for me to eat,” she boasts.

Interest in taking action. It was not about eating more for the sake of consuming more food (and risk being viewed as selfish), but eating more as a means to achieve the health and development of the PLW’s (unborn) child. Our data also suggests that creating a consumption vocabulary for pregnancy and lactation might be one way to motivate less educated women towards better dietary choices, given the foods available to them. The need for self-actualization, self-improvement, and family betterment are powerful motivators for changing behaviors.

“Dietary advice has higher action efficacy among better educated women, particularly among women who have the financial resources to act”

Designing a behavior change intervention
We have used formative research to identify the factors influencing dietary intakes among pregnant and lactating women. If one was planning a dietary intervention, one behavior goal would be to increase the proportion of women that are eating more frequently throughout the day, consuming food that is both energy-dense and nutrient-dense. Translating formative research insights into a behavior change strategy is both a science and an art.

From a scientific point of view, we have used research to identify the sociocultural intervention pathways and contextualized strategies to achieve our behavior goal. One can also apply social cognitive insights to further elaborate intervention strategies. For example, social roles and social desirability are two principles that are relevant for behavior change. In our data, social roles and social desirability are recurrent variables (or factors), with each key influencer having a unique responsibility in granting food access and encouraging food intake for women. Accordingly, a nutrition intervention that signals to gatekeepers that providing additional food to PLW is helping them fulfill their moral expectations, is less likely to encounter social resistance.

Drawing from the field of social cognition (i.e., behavioral economics), we humans use heuristics (or shortcuts) for decision-making, especially under uncertain conditions. One can deduce that pregnancy is largely an uncertain endeavor and it would not be unlikely for heuristics and “hunches” to influence decision-making. For example, we found that a past negative experience (example of availability heuristic) with the pregnancy dominated the mood and dietary practices within families. Also, fear of losing pregnancy or not recovering fast after delivery (examples of loss aversion bias) tended to be given as answers for not making any dietary changes or for exhibiting restrictive dietary behaviors. When we tested dietary concepts, we found those framed as a gain resonated better than those framed as a loss. It seems that strong imagery (i.e., mental stimulation) centered on optimistic possibilities of eating healthily might help families envision positive rather than negative outcomes with improved nutrition.

Because emotions are important pathways for motivating dietary changes, our data collection and analysis focused on identifying the emotional states that PLW might experience. Our evidence shows that there is fear of poor pregnancy outcomes; women feel guilty for thinking about their needs; the PLW wants to contribute to her family’s betterment; she finds exciting and romantic the occasional smuggling of food by husband; she feels cared for by the FLW; and she is highly motivated by a tangible positive benefit (gain) for the child. The positive emotional states in the PLW are opportunities for intervention.

“Positive emotional states in the PLW are opportunities for intervention”

Michie et al note that behaviors are a function of three elements: capability, motivation, opportunity. If one combines the formative evidence, social cognitive lens, and the COM-B model proposed by Michie et al, then we can organize a mechanism of action (impact pathway) through key intervention tactics as follows:
1. Persuade the husband and MIL (gatekeepers) to sanction and purchase foods for PLW. The key motivational payoff is the future of the child, one that achieves something better than what they have currently achieved. There is an opportunity to educate the gatekeepers on the importance of nutrition and help husbands visualize that they are fulfilling their moral duties, as a husband and a father. This signaling can happen in a number of ways, such as through a logo, key visuals, narratives, and slogans that help develop the program’s identity; deliberate targeting of husbands via community events can be used to celebrate care- or nutrition-seeking behaviors. **Behavior determinant addressed:** Create social and physical opportunity for food access for PLW; create motivation for husbands.

2. Persuade women and MIL that gains related to dietary change outweigh the potential fears. Include messages that contain facts, with an argumentation from consequence; use storytelling and metaphors to explain more difficult concepts. Positive testimonials (social proof) and social modeling can be deployed as tactics to dispel fears and encourage eating more food. **Behavior determinant addressed:** Reflective motivation for women and their social influencers.

3. Offer tangible, actionable advice for foods that can be taken at non-main-meal occasions, do not require cooking, can deliver calorie and nutrient density in a relatively small portion, and are readily available in the home. Frame the advice around the benefits that matter – a healthy pregnancy and strength to go about their day. A box to be filled with snack options would shift the locus of control of food resources from the kitchen (and MIL) to the woman, and would allow the husband to fulfill his duty by providing special foods for his wife. **Behavior determinant addressed:** Increase the self-efficacy (or capability) of women to act on their own food choices and improve physical opportunity to access food.

That was the science part. The artistic part is best left to the experts. Our project partners include Cartwheel Creative Consultancy, whose creative masterminds led the translation of facts into artistic, appealing project elements. Please watch this space for more reports or articles on this project.

**Acknowledgements**

This research was commissioned and funded by the Children’s Investment Fund Foundation (CIFF) through a grant to *Sight and Life*. A special thank you to the CIFF team for their leadership – Ms Manjula Singh, Mr Ashish Deo (GAIN, previously CIFF), and Mr Saul Morris (GAIN, previously CIFF).

We gratefully acknowledge the excellent work of the agencies and consultants who participated in this research. Kantar TNS, a research firm based in Gurgaon, conducted the formative research; Dr Shibani Kulkarni, from the University of South Carolina, conducted thematic analysis of the text data collected in the formative research and developed *Figure 1*; and Cartwheel Creative Consultancy, Mumbai, provided the creative concepts.

**Correspondence:** Eva C Monterrosa, Sr Scientific Manager, *Sight and Life; Sight and Life*, PO Box 2116, 4002 Basel, Switzerland Email: eva.monterrosa@sightandlife.org

**References**


