

# Social Marketing of Sprinkles: From Formative Research to Marketing Reality

Stanley H Zlotkin PhD  
Khalid Hasan PhD

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## Background

Iron deficiency is the world's most common yet preventable nutritional problem. Though largely eradicated from the developed countries, more than 750 million children in the developing countries still have iron deficiency anemia.<sup>1</sup> Iron deficiency anemia (IDA) is a condition, in which the body has lower levels of healthy red blood cells because of inadequate iron in the body. The main causes of iron deficiency are poor absorption of iron (vitamin C aides in iron absorption), inadequate daily intake of iron, pregnancy, growth spurts and blood loss due to heavy periods or internal bleeding. IDA is primarily caused by diets with insufficient iron or by blood loss and is more commonly found in the South Asian countries, including India, Bangladesh and Pakistan.



IDA is a leading cause of morbidity and mortality worldwide, affecting over two-thirds of children in developing countries.<sup>2</sup> In Bangladesh, over 75% of the infants and young children aged 6-12 months are affected by IDA. Moreover, more than 40% of the children are malnourished. WHO and UNICEF have suggested that infants 6-24 months should be frequently given small complementary meals rich in energy, proteins and micronutrients, in addition to breast milk. Though surveys show that breastfeeding is generally continued well into the second year of life, infants are rarely given food with adequate quantities of required nutrients.<sup>3</sup> Further complicating matters, complementary food predominantly consists of cereals, which contain high levels of phytate—apotent iron absorption-inhibitor. Consequently, infants are highly susceptible to iron deficiency anemia, and therefore morbidity and mortality. The long-term consequences of anemia in a child's life are multifarious and fatal. These consequences include impaired cognitive development, decreased learning ability, poor school achievement, weakened body resistance to illness and disease and eventually, reduced wages and quality of life.<sup>4,5,6,7</sup>

### ***Sprinkles: Proven Scientifically Acceptable***

*Stanley H. Zlotkin and his colleagues found that Sprinkles were just as effective as ferrous sulphate in raising the level of hemoglobin in children's blood (in other words, at treating anemia). The results of seven community-based trials using Sprinkles in four countries are summarized below.*

*"Each stage in the evolution of the Sprinkles intervention has been evaluated in a controlled manner," say the authors. "We determined that the use of encapsulated iron did not appreciably change the taste or color of the food to which it was added, we showed that the hemoglobin response in anemic infants was equivalent to the current standard of practice, and we documented the acceptability of Sprinkles among caregivers who used Sprinkles in their homes."*

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In the results of Zlotkin et al.'s research study on Sprinkles<sup>8</sup>, IDA was recognized as more common in the South Asian countries. The burden of iron deficiency can be reduced through holistic approaches, which promote healthy weaning practices and the use of appropriate complementary foods with improved nutritional value.

### **Sprinkles: A newly invented iron supplement**

To combat the challenges posed by IDA and suboptimal infant feeding practices, Dr. Stanley Zlotkin and other researchers from the Hospital for Sick Children (HSC) and the University of Toronto, developed Sprinkles – a new formulation and strategy to deliver iron and other essential micronutrients to infants. Proper use of this new technology would enhance child growth, development and survival.

Sprinkles are a powdered formula of microencapsulated iron and other micronutrients, like zinc, folic acid, and vitamin A and C; they are delivered in single-serving sachets and sprinkled onto complementary feeding items. The traditional intervention used to control IDA in children was an iron supplement delivered as ferrous sulphate syrup. This treatment, however, is not very acceptable among children because of its unpleasant, metallic taste. The syrup also leaves a dark stain on teeth and can induce abdominal discomfort.

These unpleasant side effects are often avoided when using Sprinkles, which are mixed into homemade, semi-solid weaning foods right before feeding, without changing the color, flavor and taste of the food. The addition of Sprinkles to any homemade food immediately fortifies the food, and hence the use of Sprinkles is also referred to as 'home fortification.'

**Research in different countries:** Studies conducted in many countries around the world found Sprinkles to be a safe and effective method for treating and preventing IDA among children. During the period between 1998 and 2004, several randomized community-based trials on Sprinkles were completed in five different countries, involving over 2,000 and non-anemic infants and children living in disadvantaged conditions, including poverty and risk of infectious diseases. The objectives of these were to evaluate the efficacy and acceptability of Sprinkles in diverse settings describe the absorption of iron from Sprinkles. Overall, Sprinkles have been successful in treating and preventing IDA among children and acceptable to children and caregivers. Through using Sprinkles, the cure rates for anemia ranged from 55-90%, which are comparable to the cure rates of using iron

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### **Formative Research on Sprinkles**

In 2005, the Hospital for Sick Children (HSC), Toronto, started investigating how to use social marketing strategies to help bring this effective and low-cost technology to the people in Bangladesh, requiring micronutrient supplement. Before doing so, Nielsen in Bangladesh (previously known as ACNielsen), in collaboration with BRAC and HSC carried out formative research and pilot testing of Sprinkles distribution among the target population. The study helped to identify factors that may influence the acceptance and use of Sprinkles. It also helped to develop an effective and sustainable social marketing strategy on Sprinkles to reduce the prevalence of IDA among infants and young children in Bangladesh. A comprehensive social marketing and communications strategy was developed to support the implementation of the program on Sprinkles distribution and communication.

The overall objectives of the study were: (a) to gain an in-depth understanding of the social, cultural, political, and environmental contexts of childhood anemia, including options for its prevention and cure; and (b) to develop an effective and sustainable social marketing strategy on Sprinkles for reducing the prevalence of IDA among the infants and young children in Bangladesh.

**Research methodology:** The study was conducted in Bangladesh from statistically selected and appropriate rural and urban areas. Since the population in Bangladesh is heterogeneous by socioeconomic conditions, religion, culture and belief systems, sampling methodology was designed to satisfy dynamic geophysical and socioeconomic characteristics, as well as the country's pluralistic culture and belief systems, which have an enormous influence on human behavior. Formative research captured pertinent information on these shapers of society to inform the development of an effective program on Sprinkles.

- Household survey: Baseline information on knowledge, attitudes, and practices (KAP) and opinions of different stakeholders in the community were collected during the study period by using household interviews. Overall, 756 mothers of children (6-24 months old) were interviewed from 9 *upazillas* (sub-districts).
- In-depth interviews: In-depth interviews among different groups of key informants (such as 36 mothers, 9 BRAC Community Health Volunteers (CHV) known as *Shastho Shebika*, 9 rural medical practitioners (RMP), 10 community/religious leaders, 8 government Family Welfare Assistants, 6 Health Assistants, 5 nutritionists and 7 NGO workers.
- Grocers/convenience stores: 50 convenient stores/grocers located within the study villages and urban areas were interviewed. The data helped to understand their willingness to procure and sell Sprinkles.
- Trial of improved practices (TIPs): An innovative research approach to identify changes/influences on the behavior of the study population groups called TIPs was carried out. After the baseline data collection and analysis, 36 mothers (4 from each Upazilla) were randomly selected. Each of them was given 60 sachets (to be consumed in 60 - 90 days). During and after TIPs, in-depth interviews were conducted among these mothers to understand their views.
- Final phase: In the final phase of the analysis all data were analyzed, organized, presented and interpreted under broad themes, enabling a greater understanding of local responses to Sprinkles and allowing the identification of strengths, weakness, opportunities and threats (SWOT) for possible strategies on Sprinkles interventions. The findings were used to develop social marketing strategies for Sprinkles in Bangladesh.

### Major Activities of the Study

A wide range of activities was implemented for this study, as follows:

**Distribution agent for Sprinkles:** Sprinkles needs to be readily available for infants and children requiring improved micronutrient intake. As such, distribution mechanisms must make the product easily accessible, people-oriented and sustainable. The consumers' perspectives are critical in formulating an effective product distribution strategy. Thus, the study collected consumers' views on their preferences for obtaining Sprinkles. Consumers were questioned about where they obtained health commodities, as well as their opinions on convenient supply sources. Convenient stores/retailers were interviewed to get a clear picture on the sales of these commodities; service providers were also approached. The different outlets proposed by respondents were triangulated and the potential sources specified by them included grocery/convenient stores (*Mudi* shops), pharmacies/drug sellers, BRAC CHVs (*Shastho Shebika* SS) and NGO workers.

**Consumers' perspective:** Post-TIPs in-depth interviews with mothers revealed that they preferred to get their supply of Sprinkles from the nearest sources. Most mothers specified the groceries/convenient stores as their preferred primary source for Sprinkles distribution. According to them, most convenient shops are located nearby and would remain open longer than alternative options. Many mothers also identified the pharmacies as a potential source of getting Sprinkles. However, rural mothers also favor the involvement of CHVs/SS as the distribution agent of Sprinkles. CHVs could easily distribute Sprinkles, especially during their routine home visit, thus ensuring a household level delivery.

**Formation of Sprinkles Working Group (SWG):** Aiming to conduct the formative research properly, the 'Sprinkles Working Group' (SWG) was formed, drawing experts from BRAC, Nielsen and the Hospital for Sick Children, Toronto, Canada.

**Nutrition education session with mothers:** In each village, CHVs and Nielsen Research Associates (RAs) jointly mobilized the mothers of selected children to attend a nutrition education session at a convenient and central location in the village. The RAs and CHVs educated mothers through presentations with flipcharts. In addition to teaching mothers about the correct dosage of Sprinkles, complementary feeding, hygiene, etc., the 15 sachets of Sprinkles were supplied to each attending mother as a first installment of four planned installments; this supply would allow mothers to use Sprinkles for the next two weeks. Sixty sachets were supplied to each target child by four bi-weekly installments, 15 sachets in each installment. This system gave a space to the RAs to carry out weekly monitoring of compliance, identify barriers to compliance and other difficulties the mothers were facing in feeding Sprinkles each week.



Mothers receiving knowledge about Sprinkles

**Distribution of Sprinkles:** Under the RAs' supervision, the CHVs distributed Sprinkles in airtight polythene bags to mothers for the first 15 days. One sachet of Sprinkles was to be given once a day to each child. Every fortnight, CHVs took back the Sprinkles sachets, whether empty or full (not fed), and gave the mothers another 15 sachets for the next 15 days. In this way, a total of four visits were made to cover the 60-day intervention period. Each mother was provided with a 60-day calendar to record the daily feeding of Sprinkles.

**Monitoring:** The RAs and the CHVs separately visited each child at least once a week, primarily to assess the consumption levels and to address any problems that might be encountered while feeding or handling the sachets. During these visits they also reinforced, motivated and encouraged parents to continue regular feeding of Sprinkles with daily cooked foods.

## Proposed Social Marketing Strategy

Based on the findings of formative research, the following social marketing strategy was proposed to the prospective manufacturers/marketer of Sprinkles.

**Vision/Mission:** To reduce, if not to eliminate, iron deficiency anemia (IDA) among Bangladeshi children aged 6-24 months, by distributing Sprinkles at an affordable price. The focus was on the quality of life for the future generation and, therefore, private and public actors would engage in manufacturing and distributing Sprinkles, with special attention given to the under-privileged community. Steps would be taken towards attaining long-term financial sustainability so that dependence on donors remains minimal.

**Goal:** To develop and implement an effective and sustainable program for reducing the prevalence of iron deficiency anemia among the infants and young children in Bangladesh.

**Objectives:** To determine how to introduce Sprinkles to the target population and to design a social marketing strategy to promote the use of Sprinkles in Bangladesh.

### SWOT Analysis: Sprinkles vs. Competitors

<b>Sprinkles</b>	<b>Competitive products</b>
<ul style="list-style-type: none"> <li><input type="checkbox"/> Food-based fortification</li> <li><input type="checkbox"/> Not a medicine</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> A large number of syrups, tablets, and injections of various brands.</li> </ul>
<p><b>Strength</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Sprinkles can be mixed in semi solid food.</li> <li><input type="checkbox"/> After mixing, no changes appear in color, flavor or taste of the food.</li> <li><input type="checkbox"/> Mothers have accepted Sprinkles for their children.</li> <li><input type="checkbox"/> No resistance from the family or community level.</li> <li><input type="checkbox"/> Many side effects seen in other products are not present with use of Sprinkles (staining of teeth, abdominal discomfort).</li> </ul>	<p><b>Strength</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Already exist in the market.</li> <li><input type="checkbox"/> Largely available.</li> <li><input type="checkbox"/> Accepted by the target audience and the doctors.</li> <li><input type="checkbox"/> No resistance from the family or from the community level.</li> </ul>
<p><b>Weakness/challenges</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Mothers and health service providers are not adequately educated.</li> <li><input type="checkbox"/> New type of product.</li> <li><input type="checkbox"/> Requires semi-solid food.</li> <li><input type="checkbox"/> Feeding of all the 60 sachets seems to be a challenging task.</li> <li><input type="checkbox"/> Mothers get frightened if their children experience initial problems like diarrhea or constipation after feeding them Sprinkles.</li> </ul> <p><u>Side-effects:</u></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Nothing was found during TIP intervention.</li> <li><input type="checkbox"/> No evidence found in RCT</li> <li><input type="checkbox"/> May be initial loose stools or constipation</li> <li><input type="checkbox"/> Darkening of stools</li> </ul>	<p><b>Weakness/challenges (Syrup only)</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Unpleasant taste.</li> <li><input type="checkbox"/> Gastrointestinal side-effects.</li> <li><input type="checkbox"/> Considered as medicine</li> <li><input type="checkbox"/> Children often find the treatment hard to take, since it has an unpleasant metallic aftertaste, leave a dark stain on their teeth.</li> </ul> <p><u>Side-effects:</u></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Gastrointestinal side-effects.</li> <li><input type="checkbox"/> Vomiting and constipation occur.</li> </ul>

<b>Sprinkles</b>	<b>Competitive products</b>
<b>Opportunities</b> <input type="checkbox"/> Demand for such product is clearly visible <input type="checkbox"/> No competitors in Sprinkles product <input type="checkbox"/> GoB, UNICEF, HKI, and other NGOs are in the process of creating a market for iron-supplements for a few years. Different studies show that the level of knowledge and awareness of IDA is consistently increasing.	<b>Opportunities</b> <input type="checkbox"/> People are becoming more aware of IDA.
<b>Threats</b> <input type="checkbox"/> Since there is a demand for such product, other substitute/competitive products may enter the market any time. <input type="checkbox"/> A large number of iron tablets/syrup is available in the market.	<b>Threats</b> <input type="checkbox"/> Sprinkles would be a great threat.
<b>Pricing</b> <input type="checkbox"/> Around Tk.1 per sachet; therefore, the cost of 60 sachets becomes Tk.60. the maximum price could be Tk. 2.00/sachet.	<b>Pricing</b> <input type="checkbox"/> On an average Tk.25 X 3 = Tk.75 (Whole dose). <input type="checkbox"/> One to three months' dose.
<b>Therefore, Sprinkles has better edge over its competitors.</b>	

Based on the findings, in-depth discussions with the key informants and experts, and review of relevant documents, it was evident that there is a potential market of Sprinkles in Bangladesh. The authors of this case estimated a potential market for Sprinkles. The major considerations were demand for Sprinkles based on market research, population growth rate in rural and urban areas, percentage of anemic children (aged 6-24 months), total number of sachets needed per anemic child and supply possibility of the products over the years.

**Sprinkles adoption process:** A great challenge lay in understanding how potential customers learn about, try and adopt the new brands of Sprinkles. Considering the adoption process, consumers were expected to pass through the following five major stages: (1) awareness, (2) interest, (3) evaluation, (4) trial and (5) adoption.

During the initial stages of adoption, Sprinkles was projected to penetrate approximately 15-20% of the customers, gradually capturing a larger portion of the market. In the fifth year, the adoption rate was projected to be more than 70%.

Table 1: Adoption rate of Sprinkles by months

1-6 months	6-12 months	12-24 months	24-36 months	36 months+
5-10%	10-20%	20-35%	35-50%	65%+

### Projected market size of Sprinkles

#### Assumption:

- Adoption rate in year 1: 15% of the total anemic children
- Adoption rate in year 2: 35% of the total anemic children
- Adoption rate in year 3: 50% of the total anemic children
- Adoption rate in year 4: 65% of the total anemic children
- Adoption rate in year 5: 70% of the total anemic children



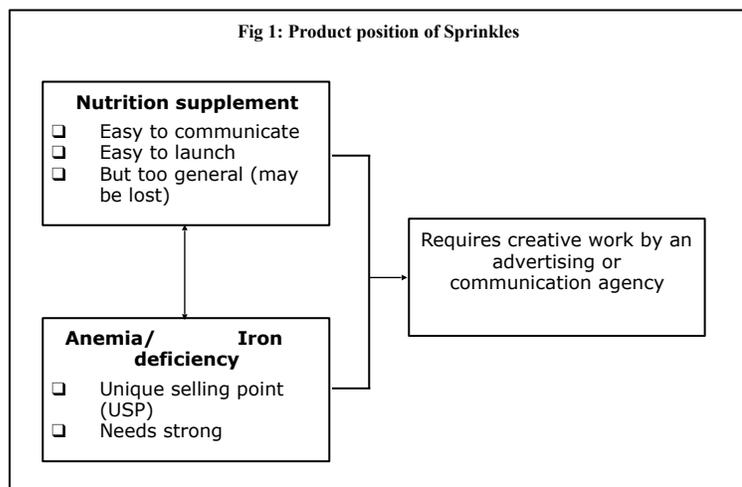
### **Implementation strategy: how to successfully deliver Sprinkles?**

**Consumer – the target audience:** The target consumers of Sprinkles are children aged 6-24 months. Thus, for successful and effective marketing of Sprinkles require addressing the following three broad categories of the audiences:

- **Primary:** (a) Mothers of children aged 6-24 months and (b) Caregivers of children aged 6-24 months
- **Secondary:** (a) Mothers-in-law and/or fathers-in-law of the parents (when mother is not available) (b) Fathers of children aged 6-24 months, (c) Convenient stores/retailers, pharmacies, (d) Health service providers (RMP, HA, FWA, village doctors, etc.)
- **Tertiary:** (a) Community leaders, religious leaders, (b) Experts (child specialists, doctors, etc.), (d) Local NGOs.

**Market segmentation:** Considering the socio-economic and geographic differences, the Sprinkles market should be differentiated into four major segments - urban, plain, ultra poor, and remote.

**Product positioning:** Philip Kotler, the marketing *Guru*, explained that product positioning is very crucial when penetrating any market. According to Kotler, product positioning is the design of a company's offering and image so that a product occupies a meaningful and distinct competitive position in the targeted customers' mind.<sup>9</sup> The formative research findings proposed to position Sprinkles as a nutrition supplement addressing IDA, as described in figure 1.



**Brand name and logo:** The brand name and logo of Sprinkles would play an important role in penetrating and positioning the product in the target markets. Any improper steps might lower the brand image or make the product appear cheap to the customers. Systematic market research would help establish an appropriate name and logo.

*As per suggestions, currently two large Bangladeshi organizations are mainly involved in marketing Sprinkles – Social Marketing Company (SMC) and BRAC. SMC is the largest social marketing company started marketing Sprinkles under the brand name of “Moni Mix” as a social marketing product. On the other hand, BRAC – world’s largest NGO --started their operations among the poor and ultra-poor people through the brand “Pushti kona”. SMC manufactures Moni Mix at their own factory at Bhaluka and distributed through their own vans to different outlets – pharmacies and convenient stores at different districts and villages. BRAC procures the product from Reneta pharmaceutical company.*

**Pricing:** Formative research gave the initial understanding of possible pricing of Sprinkles to SMC and BRAC. However, before launching the products, both the organizations carried out market research.

**Manufacturing and distribution:** Though Sprinkles can be manufactured locally or imported, the study was in favor of manufacturing locally.

**Market promotion:** The data from Nielsen Media and Demographic Survey<sup>10</sup> was used to develop the media strategy for promoting Sprinkles. Different tools (advertisement, non-traditional campaign etc.) were also used based on media research.

**Distribution channel for social marketing products:** Formative research revealed that mothers preferred receiving Sprinkles primarily from grocery shops/retailers and pharmacy outlets. Currently, most of them used to buy different social marketing products (oral saline, iodized salt, sanitary napkin and contraceptives) from convenient stores/grocery shops and pharmacies. The retailers/grocers/convenience stores also showed an interest to procure and sell Sprinkles through their outlets. Sprinkles may be distributed through the convenience stores, pharmacies and NGO workers.

### Advertising agency selection and development of television/radio spots and other media campaigns

With a view to developing and implementing a social mobilization campaign and its respective communication materials and brand management, the study findings suggested the need to select an appropriate advertising agency. The social mobilization and campaign includes television and radio spots, print materials, newspaper inserts, billboards, mobile films vans, rural IPC, community-based programs (schools, teachers, religious and community leaders, etc.) and advocacy programs.

Fig 2: Brand management



**Test marketing and commercialization:** Test marketing is not an extension of the Sprinkles screening and development stages, rather it is a sample launching of the entire marketing mix under the control of strict marketing research norms. Before launching Sprinkles all over Bangladesh, test marketing was carried out to evaluate marketing, advertising, and/or promotional ideas and strategies for efficiency and effectiveness in anticipation of a wider or national roll out. During test marketing, SMC and BRAC considered some of the key factors such as brand name, product concept, pricing, packaging, distribution, sales promotion, advertising, publicity, advocacy and customer satisfaction and perception. Test marketing helped to obtain a measure of Sprinkles' sales performance in a natural marketing environment. On the basis of test marketing findings, both SMC and Brac

launched the products as *Moni Mix* and *Pushtikona* respectively.

### **Need for social mobilization through influencing behavior:**

Social changes can be brought about through influencing attitude, intention and behavior of individuals. Influencing behavior in any individual is a time-consuming process. A number of factors usually trigger influences to imbue hygienic behavior. An inflection point, at which a person intends to influence (not change) their behavior, must first be reached. The process of reaching this state of mind depends on a person's exposure to new information about an object, event or issue; knowledge and understanding of themselves and their environment; pressure from the community or peer groups; and necessary resources, facilities and skills. All such reinforcing factors will influence a change in an individual's beliefs. People are assumed to understand the consequences and benefits of influencing their behavior.

A person does not adopt a new behavior immediately after hearing something once, by seeing an IEC (information, education and communication) material or by exposure to any "behavior influence communication" (BIC) campaign. In general, five characteristic steps are associated with the process of influencing individual's behavior: (1) Increased awareness and knowledge, (2) Approval through belief, (3) Formation of positive attitudes, (4) Positive intentions, and (5) Counseling and advocacy.(source?)

An individual does not have to go through all five steps. The first two steps – increased awareness and knowledge and approval – are the easiest to achieve. Variation in the behavior change process starts during the formation of positive attitudes towards the desired "change". The largest challenge of behavior "change" is developing positive intentions. Programming efforts and campaigns need to concentrate on addressing the intention process, not only increasing knowledge and awareness. Positive intention leads to practice, and hence influencing the behavior toward ultimate accepting or rejecting any product, services or practices.

**Steps to influence behavior:** Sprinkles is a new product to customers and other stakeholders. The major task of the marketing and communication campaigns would be to create awareness and more importantly motivate mothers and caregivers to buy Sprinkles for their children and later become advocates of the Sprinkles brand. The following behavior influence framework illustrates the progression from increased knowledge to sustained change and, finally, advocacy. The framework emphasizes that the communication intended to influence the change is a continuous process. Behavior change is the goal, but several intermediate steps must be addressed before that goal is attained.<sup>11</sup> Furthermore, people at different stages constitute distinct audiences, requiring different messages and sometimes different vehicles, such as IPC, mass media, or social mobilization.

- **Knowledge:** (a) Recalls Sprinkles-related messages (b) Understands what Sprinkles is?
- **Approval:** (a) Responds favorably to Sprinkles-related messages (b) Discusses Sprinkles-related issues through personal network (family, friends etc.). (c) Approves Sprinkles.
- **Intention:** (a) Recognizes that Sprinkles can combat IDA (b) Intends to consult a provider (c) Intends to give Sprinkles to their children.
- **Practice:** (a) Full compliance. (b) Experiences and acknowledges personal benefits of Sprinkles.
- **Advocacy:** (a) Advocates others to practice.(b) Supports programs in the community.

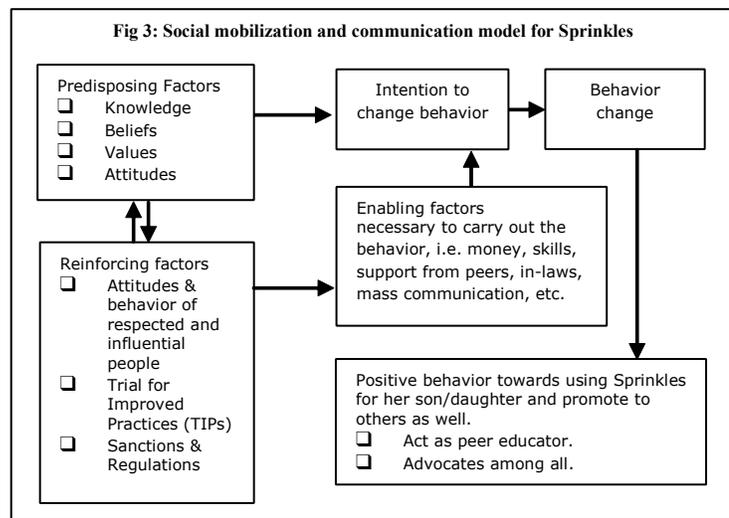
The study suggested that the concept of Sprinkles and its related issues must be well understood and grasped; this can be achieved through community mobilization. Developing an appropriate social communication campaign is imperative to overcoming the critical challenges of (a) Regular intake, (b) consumption of 60 sachets in 60 - 90 days, and (c) advocacy among all, and national issue.

Figure 3 shows the coordinated efforts of social mobilization and a communication campaign that work together to convince mothers to buy Sprinkles for their children.<sup>12</sup>

## Sprinkles – The Reality in Bangladesh

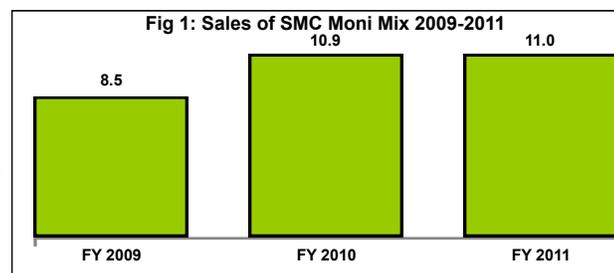
The formative research on Sprinkles revealed a positive potential business opportunity. The findings were disseminated among the prospective organizations and decision makers. Based on the recommendations, **Social Marketing Company, BRAC, and Renata** showed interest in the marketing of Sprinkles under different brand names.

In addition, the World Food Program (WFP) distributed Sprinkles among the *Sidr* (cyclone) affected people. The post formative research scenario on marketing Sprinkles is narrated below.



**Social Marketing Company:** Social Marketing Company (SMC), Bangladesh, is dedicated to providing opportunities for better family health for the people of the country, by addressing issues of social priority.

In Bangladesh, SMC is a pioneer in the successful marketing of social products, such as saline, contraceptive pills, and condoms. In 2008, SMC introduced Sprinkles to address childhood IDA and sold them under the name of "*MoniMix*". SMC promptly started marketing the product in 2008, covering all Bangladesh's 64 districts. *Moni Mix* contains ingredients – iron (12.5 mg), zinc (5 mg), acid (160 µg), vitamin A (300 µg) and vitamin C (30 mg).



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**BRAC's response to childhood anemia:** BRAC, the largest NGO in the world, has a successful track record of working with the poorer populations within and outside Bangladesh. In December 2010, BRAC started marketing Sprinkles under the brand name *Pushtikona*, targeting infants and children of 7-60 months in poorer communities. BRAC, in partnership with GAIN and Renata Ltd. (a private pharmaceutical manufacturing *Pushtikona* for BRAC), started marketing this micronutrient powder (MNP), covering 61 districts of Bangladesh (455 sub-districts) through BRAC CHVs.

**World Food Program:** The WFP in Bangladesh implemented an Emergency Operation Programme (EMOP) in 2009 in *Sidr* cyclone-affected coastal districts of Bangladesh. In the first three months of the program, WFP distributed food to a population of 2.3 million. WFP also distributed Sprinkles, commonly referred to as multiple micronutrient powder (MNP), under the brand name *Pushtika*, for nutritional rehabilitation of a target group of 168,000 beneficiaries consisting of children (6-59 months) and pregnant and lactating women in six cyclone-affected districts. The distribution began in mid-March 2008, lasting for about six months.

## Conclusion

Research has revealed that consumers (mothers and other stakeholders) have well accepted the newly introduced Sprinkles, or MNPs. Sprinkles aims to reduce IDA among children, especially those who are poor and underprivileged. The research suggested using the social marketing concept to push the product distribution in Bangladesh. BRAC and Social Marketing Company have accepted the research findings and have started marketing the product using two brand names – *Pushtikona* and *Moni Mix* respectively: Sales trends are positive and encouraging.

On the basis of research, the marketing of Sprinkles by two large organizations – SMC and BRAC paved the way for the poor and underprivileged people of Bangladesh. It can be concluded that this noble venture can be replicated in other countries as a social marketing or social business approach for reducing iron deficiency anemia among the millions of poor and malnourished children globally.

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<sup>2</sup> World Health Organization (2000). *Malnutrition: The Global Picture*. Geneva: World Health Organization.

<sup>3</sup> Helen Keller International, Bangladesh (2001). *The nutritional surveillance project in Bangladesh in 1999. Towards the goals of the 1990 worlds summit for children*. Dhaka, Bangladesh: Helen Keller International.

<sup>4</sup> Oski FA, Honig AS, Helu B, Howanitz P (1983). Effect of iron therapy on behavior performance in nonanemic, iron-deficient infants. *Pediatrics* 71:877-80

<sup>5</sup> Walter T (1989). Mental and motor development. *Am J Clin Nutr* 50:655-66

<sup>6</sup> Watkins WE, Pollitt E (1997). Iron deficiency and cognition among school age children. In: *Book name? Nutrition, health, and child development: research advances and policy recommendations*. Washington (DC): Pan American Health Organization, The World Bank and Tropical Medicine Research Unit: 179-97.

<sup>7</sup> Thomas D, Frankenberg E (2002). Health, nutrition and prosperity: a microeconomic perspective. *Bull WHO* 80:106-13

<sup>8</sup> Zlotkin SH, Christofides AL, Hyder SM, Schauer CS, Tondeur MC, ShariEFF W. (2004). Controlling iron deficiency anemia through the use of home-fortified complementary foods. *Indian J Pediatr* 71:1015-1019

<sup>9</sup> Kotler, Philip; *Marketing Management USA*, 2000

<sup>10</sup> ACNielsen Bangladesh (2005); *Bangladesh Media and Demographic Survey 2005*

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#### **Authors:**

##### **Professor Stanley H. Zlotkin PhD**

*Professor, Pediatrics, Nutritional Sciences and Public Health and Chief, Global Child Health, Hospital for Sick Children, University of Toronto, Canada*

##### **Khalid Hasan PhD**

*Senior Advisor, Nielsen South Asia and Editor, Journal of World Marketing Summit, Canada*