Original Article

A rapid assessment and response approach for socially marketed nutrition commodities in Viet Nam

Tahir Turk PhD^{1,2}, Nguyen Dinh Quang MD³, Tran Thuy Nga PhD⁴, Huynh Phuong PhD⁴, Le Van Anh Tung BSc⁴, Vu Hoang Trang MSc⁴

¹Communication Partners International, Springfield, NSW, Australia
 ²Curtin University School of Public Health, Bentley, Western Australia
 ³UNICEF, Ha Noi, Vietnam
 ⁴National Institute for Nutrition (NIN), Ha Noi, Vietnam

Background: The leading cause of death in children in developing countries is protein-energy malnutrition. In Viet Nam, 25.9% of children under 5 experience stunted growth and 6.6% are moderately wasted. Iron deficiency anaemia and vitamin A deficiency contribute to these and other malnutrition conditions. Objectives: Given these factors, more evidence based approaches are required to improve understanding of current attitudes, opinions and behaviours of mothers with young children, in order to operationalise social marketing of nutrition commodities in Viet Nam. Methods and Study Design: A literature review supported a rapid assessment and response method involving semi-structured interviews with 77 stakeholders and focus group discussions with 80 program beneficiaries from four geographic locations in the north and south of Viet Nam. Discussion agendas were developed to address key program issues with grounded theory utilized for data analysis. Results: Data analysis highlighted challenges and opportunities within the six Ps of social marketing: Supply and demand side issues included: cost and the quality of products, the limited scale of interventions and promotional activities. Policy issues identified related to current policies that inhibited the broader promotion and distribution of micronutrient products, and opportunities for improved dialogue with policy partners. Partnerships further emphasized the need for public private partnerships to support the social change process. Conclusion: Implications for theory, policy, and practice indicates that rapid assessment and response is a cost-effective, pragmatic method of public health research, in resource constrained settings, to explore policies and behaviours amenable to change and build stakeholder engagement in the program.

Key Words: nutrition, malnutrition, needs assessment, rapid assessment and response, social marketing

INTRODUCTION

The leading cause of death in children in developing countries is protein-energy malnutrition which is usually the result of inadequate intake of calories from protein, vitamins, and minerals.^{1,2} In Viet Nam, malnutrition and undernutrition in children has been identified as a continuing problem, despite significant reductions in prevalence during the last decade. Iron deficiency anaemia and vitamin A deficiency among children under 5 years in Viet Nam is 29% and 14%, respectively, but as high as 40% in the mountainous and underserved regions of the country.^{3,4} Micronutrient (MN) deficiency leads to an increase in child morbidity and mortality, impaired intellectual development and stunting in children, with 25.9% of children in Viet Nam experiencing stunted growth and 6.6% being moderately wasted.⁵ Iron deficiency anaemia is also a common public health concern in a number of regions of Viet Nam.⁶ Iron deficiency anaemia prevalence is highest in pregnant women at $36.0\%^7$ with one of the most effective interventions identified being iron fortification and supplementation.⁸

There needs to be improved understanding on how to prevent conditions such as malnutrition/undernutrition, in

order to reduce the considerable burden of disease. Malnutrition may relate to poor diet or not getting the right amount of vitamins, minerals, and other nutrients. This includes over-nutrition, resulting from consuming too many nutrients, for instance, in fat, sugar and salt; or undernutrition, resulting from inadequate amounts of nutrients. Optimal programming models to effectively prevent and manage these and other health conditions may be currently lacking in the region, with Viet Nam now moving into a transition period with nutrition health problems as a result of the co-existence of undernutrition and food insecurity,⁹ combined with new and emerging health problems from overnutrition. These include a number of nutritionally-related chronic disease conditions including; hypertension, diabetes, and cardiovascular diseases which

Corresponding Author: Dr Tahir Turk, Communication Partners International, Springfield, NSW, Australia. Tel: +61 2 4365 2774; Fax: +61 2 4365 2774 Email: tturk@cpimail.net; tturk@bigpond.com Manuscript received 25 January 2016. Initial review completed 04 March 2016. Revision accepted 10 May 2016. doi: 10.6133/apjcn.072016.12 are rapidly on the rise as a result of dietary and lifestyle changes.¹⁰ These existing and emerging nutrition problems have caused a double burden of disease in Viet Nam.⁹ As such, more evidence-based approaches are required to improve understanding of current attitudes, opinions and behaviours of mothers with young children, in order to operationalise social marketing of nutrition commodities in Viet Nam.

Given these health priorities, a needs assessment was conducted of Viet Nam's existing nutrition and other social marketing (SM) and behaviour change communication (BCC) public health programs. The research aims were to use findings from the needs assessment on consumer attitudes, opinions and behaviours to develop best practice SM guidelines to more fully operationalise and rapidly scale-up SM programs, within the Viet Nam context.

Social marketing - situational analysis

Social marketing approaches globally have been utilized for public health and education programs since the mid-60s¹¹ with the technology more fully articulated in the subsequent decade.¹² More recently, social marketing has been defined as a process which seeks to develop and integrate marketing concepts with other approaches to influence behaviours that benefit individuals and communities for the greater social good.¹³ The process is seen to also incorporate socially marketed commodities that are effective, efficient, equitable and sustainable as part of social change programs.¹² Commodities are defined as an article of trade or commerce, especially a product as distinguished from a service: something of use, advantage, or value¹⁴ and this can also include socially marketed commodities such as nutrition supplements, MN fortified and healthy foods.

In order to identify the scale of the problem, and social marketing and other nutrition interventions implemented to date, an online database search was conducted as part of a needs assessment, to identify secondary data sources, including published studies in the region, and global perspectives. The online search was supplemented with manual searches of existing documents within the National Institute of Nutrition (NIN), which is an instrumentality of the Ministry of Health (MOH), and other partner libraries.

The literature review and consultations with key stakeholders identified that the SM landscape in Viet Nam is prolific with a number of government and nongovernment organisations (NGOs) implementing activities since the first family planning program was initiated in the country in 1963.¹⁵ Predominant SM approaches operating in Viet Nam include programs and commodities promoted for improved nutrition, through the NIN, as well as UNICEFs nutrition iron and folic acid supplements program. Additionally, social marketing techniques are also utilised by international NGOs such as Population Services International (PSI) for water and sanitation products, HIV/AIDS prevention and trafficking of rhino horn; DKT for family planning and reproductive health, and condom socially marketed commodities; Marie Stopes International (MSI) for reproductive health and family planning services; and PATH for similar services,

but also including SM for vaccines, immunization, and emerging epidemic diseases.

SM programming approaches

Discussions with the various SM and BCC stakeholders, and a review of secondary data sources, identified that there were a number of different programming models in evidence. This extends to differences in SM and BCC terminology, despite a number of similarities in approaches and activities. Approaches used by the respective SM agencies included internal mechanisms such as NIN, for the development of products and services to meet consumer needs, where such products or services may currently not be available in the marketplace. A second SM approach implemented by UNICEF operates to develop partnerships and conduct capacity building and institutional strengthening activities to achieve market penetration through commercial, quality assured, and competitively priced micronutrient supplements. Another type of public private partnership SM approach operates through the Global Alliance for Improved Nutrition (GAIN) where agency personnel work more directly with the private sector in supporting agencies to fortify existing food products commonly available through retail stores. These include staples such as soya and fish sauces, spice powders and edible oils.¹⁶

The last SM approach operating in Viet Nam adopts a social franchise model. It is utilised to varying degrees by a number of NGOs including PSI, DKT, PATH and MSI, and involves the development of branded consumer products, including contraceptives, for family planning and STI prevention, and water and sanitation health products. The model operates to develop standards and quality assured subsidized products and services, consistent pricing and distribution mechanisms to health consumers needing affordable, reliable health services and products. The rationale for SM programs currently operational in Viet Nam is based on the premise that many of the health commodities and services marketed, predominantly serve low- and middle-income groups, while commercial suppliers target higher-income, urban consumers with highermargin brands. Given this premise, SM agencies currently operating in Viet Nam could argue that the variety of approaches and SM activities conform to a "Total Market Approach" to better serve all consumer segments.¹⁷ An outline of the nutrition fieldwork study method for the needs assessment follows.

METHOD

The formative research stage comprised a rapid assessment and response (RAR) methodology involving consultations with stakeholders and discussions with program beneficiaries from four geographic locations - Hanoi, Hai Phong (north Viet Nam), An Giang, and Hồ Chí Minh City (south Viet Nam). The approach, which is growing in popularity in the resource constrained settings of developing and transitional countries, is seen as a cost-effective, pragmatic method of public health research.¹⁸ The strengths of utilising RAR qualitative approaches are that they can generate a richness of data, where the study participants' perspectives and experiences are the goals.¹⁹ Academically robust, qualitative methods, including: ob-

servational research, case study approaches, semistructured and in-depth interviews, narratives and personal diaries, are generally seen to have been underutilised in public health program research.²⁰ At the same time, it is important to understand and address the specific social, cultural and other determinants which contribute to health problems in developing countries, and can also lead to more effective health solutions.²⁰ These methodological approaches to data collection can act as powerful tools for understanding culturally-specific influences.¹⁹

Ethics approval: 1615/ QD-VDD for the nutrition study, was provided by the Director of the National Institute of Nutrition, Ministry of Health, Viet Nam on 28 November 2014.

Formative research for the nutrition social marketing program involved discussions with a total of 157 participants. Semi-structured interviews (SSIs) were used as these are commonly accepted qualitative research approaches²¹ and most appropriate for RAR. The stakeholder consultation component included interviews with 77 key informants from the public sector including: health program managers, policy makers, allied health agency managers and technical staff from the Viet Nam Food Administration (VFA) and Public Health Institute. District stakeholders included: district and commune health centre managers, district and commune health workers, health collaborators (front line field staff), and staff from international NGOs, and the private sector - drug and food manufacturing company managers and sales staff.

The selection of stakeholders was based on program management advice on intervention sites and feedback from provincial staff responsible for implementing the program. Additionally, a snowballing technique was used to identify potentially important stakeholders as the discussions progressed and new issues emerged.²² This organic approach of RAR, which does not focus on specific quotas or professional groupings, instead allows for optimal numbers of stakeholders and beneficiaries to be interviewed within the limitations of the mission, and fieldwork data collection periods.

SSI discussion agenda was developed to cover a range of key issues emanating from the literature review and consultations with NIN and UNICEF program managers. Discussion agenda were adapted to cater to the different issues under investigation with public sector and private sector stakeholders. Research questions for stakeholders included: knowledge about anaemia and the micronutrient program, attitudes and perceptions about the nutrition SM program, including specific nutrition products: vitamin supplements, retail items fortified with micronutrients; including spice powders, soya and fish sauces, and edible oils; and micronutrient powders (MNPs) used to supplement home meals for toddlers. Additionally, probing was conducted around price elasticity of products with various target audiences, existing and potential distribution networks and promotional approaches. Discussions with policy makers focussed more specifically on policy issues designed to facilitate nutrition program objectives, whilst discussions with private sector partners also included additional investigation around coordinating mechanisms and communication channels to build more effective partnerships. Barrier and benefit analysis was also conducted through questions related to program challenges and achievements.

An additional 80 program beneficiaries in risk categories of mothers with young children, were consulted on aspects of the SM program and commodities. The sampling frame for the program beneficiaries included participants in locations where malnutrition was high, but also included other groups at potentially lower risk, given the broad range of nutrition commodities developed by NIN, UNICEF and private sector providers. Segmentation of the final groups was conducted by gender - 7 female groups and 1 male (reference) group, aged 18-34 years (reproductive age range for respondents with children 1-5 years), geographic location (urban, peri-urban and rural areas), and socio-economic status (low/medium and medium/high income groups, demarcated according to national census income classifications). Final selection of beneficiaries was supported through the use of a participant screener with items covering the various segmentation criteria as well as exclusion criteria including; health professionals, government and NGO staff, and people working in advertising, market research or public relations. Additional exclusion criteria included participants who recently attended a focus group discussion, and screening for articulation: feeling comfortable expressing myself in a group, find it easy to put my ideas into words, find it easy to talk to almost anyone, etc. Other items examined, occupation of the head of the household, child and pregnancy status.

Discussion agenda topics for program beneficiaries were supported by preliminary analysis of interviews conducted with staff from NIN, UNICEF and GAIN, which provided additional insights on key issues. This component of the study was conducted through focus group discussions (FGDs), as the approach has been found to encourage participation from people who may be reluctant to be interviewed on their own or who feel they have nothing to say.²³ FGDs have also been shown to have advantages for researchers in the field of health and medicine, as they do not discriminate against people who may not be literate.²⁰ Key questions focused on recall of any nutrition interventions or products, knowledge and attitudes regarding malnutrition for women and children, existing and preferred communication channels, and purchase intentions regarding the range of nutrition products, including iron and folic acid supplements, MNPs and fortified retail products. An additional component of the research examined an existing micronutrient fortification logo developed by NIN and displayed by a number of manufacturers on their products. Prompt cards featuring the logo as well as MNP products developed by NIN were used to probe for participant recognition and perceptions of the logo, and the products to which it was identified. Attitudes and perceptions of the micronutrient logo were also examined during stakeholder consultations with findings reported elsewhere.24

Following review of the discussion agenda by the field team, final amendments were made and the instruments were translated into local language to ensure easy facilitation of the interviews and group moderation. Given the project's resource constraints no time was available to back-translate the range of instruments, prior to the deployment of field teams. Additionally, a pilot group was also not able to be with the initial group discussion providing insights on any modifications required.

Fieldwork approach

SSIs were conducted individually with management staff due to their professional status and busy schedules, and with affinity groups of 3-7 respondents comprised of front line field staff such as district and commune health workers, and health collaborators, numbering over 90 thousand staff across the country. Each interview lasted between 30-90 minutes. Given the fact that a component of the study involved capacity building of various staff within NIN and GAIN, different teams were dispatched to the north and south of the country. Two female moderators were trained to facilitate the groups in each region, while the same note-taker recorded all responses. This ensured a degree of consistency in the data collection.

Each FGD consisted of 7-12 participants, with group moderation taking approximately 60-90 minutes per group. Two groups each were conducted in the four field locations. Data collection involved compiling of notes in Word format directly onto a laptop computer, by a notetaker working closely with interpreters during each session. Notes were compiled in a question-by-question format to capture what the individuals had to say in regard to each topic theme. To clarify any potentially ambiguous themes, on-site summaries were supplemented through dialogue between team members, immediately following discussions. Additionally, all the groups and stakeholder discussions were digitally recorded for more in-depth analysis by program management, at a later date. Fieldwork notes from the SSIs and FGDs totalled 65 single spaced, A4 pages.

Data analysis

Analysis of the data was carried out in two iterative stages: individual and group responses (in the case of SSIs), and within-group responses (in the case of FGDs). Grounded theory was utilized to explore cross-case patterns, both within and across groups and individuals.²⁵ Grounded theory has been found to provide a systematic way of examining qualitative data from the perspective of those who are actually experiencing the phenomena.²⁶ The first stage of analysis focused on identifying key issues emanating from both the stakeholders and beneficiary groups. The use of open, axial and selective coding assisted in identifying and categorizing (coding) to explore the inherent categories and how they related. Once core categories were identified, selective coding was utilized to identify other categories which may be part of that core category. As well as providing identification and exploration of specific themes and core concepts, triangulation of the data was conducted across stakeholder and beneficiary groups, and the available literature, and assessed according to social marketing criteria of the 4Ps.²⁷ Additionally, two other Ps emerged as important determinants to the future continuous improvement of program components. Barrier and benefit analysis also assisted in illuminating the study findings and tabulation.²⁸

RESULTS

A number of key themes emerged from the analysis with these themes contained within the core categories of the 4Ps of social marketing: product, price, place, and promotion.²⁷ The analysis also identified a number of other themes which were subsumed under core categories of an additional 2Ps of the social marketing paradigm: policy and partnerships. The core categories highlighted 12 challenges and 12 opportunities for the program moving forward, based on consumer attitudes, opinions and behaviours in relation to nutrition commodities. Challenges to fully operationalising the SM program based on respondent feedback according to the first of the 4Ps-product, emerging from a supply perspective, identifies concerns relating to the high cost and procurement of fortified micronutrients by manufacturers and retailers. Consumer demand perspectives highlight general concerns about product labelling and the perceived quality of products due to the abundance of counterfeit nutrition products. Price consideration concerns relate to the low price elasticity and subsequent lower demand for nutrition products and supplements, particularly by lower income groups. Place or distribution challenges identify the low financial incentives for health workers, which may impede their engagement in the program. The lack of training and other incentives provided to front line field staff may also limit the distribution of micronutrient commodities at commune and village level, through the health system. Promotion challenges identify the currently limited scale of interventions and promotional activities through mass media, the lack of highly credible health spokespeople to promote the products, and the impact of husbands on their wives purchasing intentions, which are currently not significantly addressed through any SM programs (Table 1).

Conversely, opportunities identified by stakeholders and beneficiaries for the nutrition SM program and product development, under the product category, are the high degree of source credibility²⁹ provided by the Governments' NIN branded products. In terms of pricing opportunities, respondents identified that price sensitivity could be offset through greater articulation of the health benefits of the products and endorsement from health authorities to assure their high quality. Place opportunities reinforce the need to build capacity through the health system for wider distribution of nutrition products to those in most need, through credible information sources of government health workers. Promotion opportunities identify the potential for scaling up of promotional activities to a population level, and the willingness by some private sector partners to engage more fully in the program on the proviso that NIN endorsement add-value to their fortified products and increase purchase intentions (Table 2).

Finally, challenges and opportunities were explored according to the two additional Ps of policy and partnerships. Findings from stakeholders and beneficiaries identified key challenges of the SM program are current policies that inhibit promotion and broader distribution of MN products. This includes policies which inhibit access to fortification ingredients to food manufacturers, as well as policies that limit the role of the health network to promote these products, given the fact that they are currently deemed medicines, which limits advertising of

Four Ps	Program beneficiaries/stakeholder feedback
Product	"The issue of micronutrient fortification? They are not cheap, they are difficult to formulate because of the sensories in an environment where cost pressures are enormous consumers are counting every dong." R&D Director –Retail Food Manufacturer
	"When I see it (micronutrient fortified logo), I think the product has these ingredients, but I do not trust many prod- uct labels as there are many counterfeit products in the market place." Female Beneficiary 18-34 yrs - Ha Noi.
Price	"One of the challenges is that there are products that are cheaper but not in compliance so women, especially low income groups, will select these other products" Senior Staff, Micro-Nutrient Department - National Institute of Nutrition (NIN), Ha Noi.
	"I would like to feed my children with other foods but our income is limited so we can't always do that." Female Beneficiary (Rural) 18-34 yrs - Phu Lam Commune, Mekong Delta.
	"The incentive we get from Bibomix is very low but we are still willing to introduce the product as the benefits will be seen in 10 years from now." Health Collaborator - Vinh Tien Commune, Hai Phong.
Place	"We need a greater circulation of the product in small villages at the province level and we also need to have incen- tive programs to encourage people, as this is a transition for us from free to sale of the product." Bibomix Distributor - Hai Phong Province
	"We have to sell Bibomix (MNP) through the health system but if it is not termed a medicine, then it can't be sold through the health centres." Senior Staff, Product Fortification Project - GAIN NGO, Ha Noi.
Promotion	"For toothpaste, they say that dentists recommend this product. That's why people buy it!" Female Beneficiary 18-34 yrs–Vihn Bao District, Hai Phong Province
	"The communication channels are newspapers and TV channels - local TV channels, leaflets and handouts, and currently people are not getting enough of these." Senior Staff, Reproductive Health Centre – Hai Phong Province.
	"My husband makes comments on what is good for health, and he commented to me to buy it, but I then make the purchase." Female Beneficiary 18-34 yrs–Vihn Bao District, Hai Phong Province

Table 1. Challenges to nutrition social marketing program and product development by product, price, place and promotion

Table 2. Opportunities for nutrition social marketing program and product development by product, price, place and promotion

Four Ps	Program beneficiaries/stakeholder feedback
Product	"It's a good product. I have kept using the product with my child. I have not used other products in the market. I use the products when my children are weaning. I use other products also for my kids - Dielac. But I think Bibomix is better as I think Dielac is sweetened and looks like powdered milk" Female Beneficiary 18-34 yrs–Vihn Bao District, Hai Phong Province.
	"I read the instructions on the (Bibomix) box on how to use it, and I also checked the ingredients." Female Beneficiary 18-34 yrs–Vihn Bao District, Hai Phong Province
Price	"Healthy, affordable and reasonable price. The product should meet the recommendations of the benefits provided" Female Beneficiary 18-34 yrs–Vihn Bao District, Hai Phong Province.
	"I recommend to my wife that she should choose the safe food for health, choose the fresh food, having the stamp of a reliable organization." Male 18-34, Binh Chánh district, Hồ Chí Minh City.
Place	"I think that these micronutrient products should be introduced by health facilities. For location of sale, we should choose locations having high prestige, like supermarkets." Male 18-34, Bình Chánh District, Hồ Chí Minh City
	"Most village health staff are also nutrition collaborators. At each commune health centre we have a person respon- sible for nutrition, and they focus on communication with pregnant women and children." Senior Staff, Micro-Nutrient Department - National Institute of Nutrition (NIN), Ha Noi.
	"Nutrients can come from food or from supplements in the market. For instance iron supplements to prevent anae- mia in women. So when they get pregnant women need to ensure that they get enough iron. You can get a packet from health workers"
	Female Beneficiary (Rural) 18-34 yrs - Phu Lam Commune, Mekong Delta.
Promotion	"The funding landscape for nutrition is scarce. However, there is definitely more scope to get manufacturers to comply with standards and then motivate them to engage through socially marketed approaches." Senior Staff - Population Services International NGO, Ha Noi.
	"So how can we fund it so that consumers have NIN recommendations? How can we join hands with NIN, join hands and get 1+1 = 3 rather than 1 +1= 2?" R&D Director –Retail Food Manufacturer, HCMC.

these nutrition products. On the other hand, policy opportunities include improved dialogue with Viet Nam Food Administration, the wing of the Ministry of Health involved in setting policy for marketing and promotion of nutrition products, to achieve more effective lobbying for policy change in regard to these issues. Partnership opportunities identify the potential to establish a more commercially based "Micronutrient Marketing Board," comprised of public and private sector partners, as well as better coordination of the nutrition product distribution program through commune networks of women's and farmer's unions (Table 3).

DISCUSSION

The RAR provided considerable insights on how to improve SM nutrition programs in Viet Nam. Recommendations emanating from the findings include consideration of pricing policies when developing nutrition products, with findings on low price elasticity with low income groups corresponding to systematic reviews on demand for a range of other foods.³⁰ The importance of providing credible sources for nutrition information, identified by program beneficiaries, as well as effective branding of fortified nutrition products and other supplements, and promotion through a range of communication channels, is also supported through existing literature on social marketing best practice approaches.³¹ Given the resource constrained settings in Viet Nam, more effective coordinating mechanisms are needed for greater engagement of partners. This may be best achieved through the establishment of a Micronutrient Marketing Board, with representation from public and private sector agencies. As well as achieving greater engagement and understanding of key issues from a broader range of perspectives, the board could put the MN program on a firmer financial footing

to enable national social marketing campaigns to build awareness and knowledge about the need for MNs, iron and folic acid supplements or other priority nutrition products, and increase purchase intentions of these products, with consumers. Second, improved dialogue is recommended with the VFA involved with policy development, with the identification of program champions who could advocate for and lobby for reforms. Third, is the need for greater engagement through training and other incentives of the health sector in promoting and distributing MN products through the considerable number of respected, front-line field workers. Last, is the need for the development of practical, simple to follow, SM operational guidelines to provide a stepwise approach for national and provincial program managers, in order to build SM program capacity and scale-up interventions. Insights from needs assessments should be included at each step of the process to provide opportunities for continuous improvement of the program. An important component of the stepwise approach, is the articulation of a monitoring and evaluation framework, with a range of performance indicators to be standardised across partner programs.

In conclusion, the RAR approach to the development of SM operational guidelines for nutrition in Viet Nam has proven to be successful. RAR provides invaluable insights into program improvement within a relatively short time-frame of 14 days for fieldwork and data collection, as well as building greater dialogue and engagement from key SM partners. For these reasons, the greater utilisation of RAR approaches in the resource constrained settings of developing countries is highly recommended. Additionally, more consumer research generally, should be conducted when developing social marketing interventions for nutrition commodities in Viet Nam and other LMICs experiencing similar health issues. The approach

Table 3. Challenges and opportunities for nutrition social marketing program and product development by policy and partnerships

5th - 6th Ps	Challenges - program beneficiaries/stakeholder feedback
Policy	"Some of the key challenges is that we require a good policy environment that facilitates the contribution of health workers in the distribution network so we need a good legal environment for the health network to devel- op further for the target populations." Senior Staff, Nutrition Program - UNICEF, Ha Noi
	"It is very time consuming and difficult for producers for sample testing for product quality. NIN needs to pro- vide a one stop service to have a company involved with the project to assist them with the facilitated proce- dures with an expert from NIN. If they want to develop a new product, develop labelling, and such." Social Marketing and Monitoring and Evaluation Consultant - GAIN, Ha Noi.
Partnerships	"We would love to be part of a working group. In my experience in working in many different countries and regulatory groups it would be good to set up industry working groups to contribute toward the development of these guidelines. R&D Director –Retail Foods Manufacturer, HCMC.
	Opportunities - Program Beneficiaries/Stakeholder Feedback
Policy	"One of the challenges is that there are products that are cheaper but not in compliance so women, especially low income groups, will select these other products" Senior Staff, Micro-Nutrient Department - National Institute of Nutrition (NIN), Ha Noi.
	"I would like to feed my children with other foods but our income is limited so we can't always do that." Female Beneficiary (Rural) 18-34 yrs - Phu Lam Commune, Mekong Delta.
	"We are still willing to introduce the product as the benefits will be seen in 10 years from now." Health Collaborator - Vinh Tien Commune, Hai Phong.
Partnerships	"We still need to collaborate with other organisations for instance, women's unions, and farmer's unions." Senior Staff, Bibomix - Hai Phong Province.

is seen as particularly successful in addressing large scale health problems, including communicable and noncommunicable diseases, and emerging pandemic threats.

Limitations

Limitations of the RAR study approach relate to the reduced level of academic rigour able to be applied to some aspects of the fieldwork method, data collection and analysis. In this case, back translation of the numerous discussion agenda was not possible given the timeframe and budgets available for the project. Additionally, although interviews and discussions were digitally recorded, time and budgetary constraints required data analysis from the comprehensive field-notes compiled as the discussions took place. Although this process may be critiqued, it could also be argued that the benefits of observing and manually recording discussions as they take place can lead to greater insights than may be achieved through analysis of recorded materials by a researcher operating from an office many thousands of miles away.

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AUTHOR DISCLOSURES

The authors declare no conflicts of interest and have not entered into any agreements with the study sponsors that may have interfered with authors' access to all of the study's data or their ability to analyse and interpret the data, or to prepare and publish manuscripts independently when and where they choose. Perceived conflicts of interest may include the principle author's consultancy to the sponsors of this study - UNICEF and GAIN, and additional author's employment by these organizations. Other perceived conflicts may arise with authors from NIN who conducted fieldwork, translation services and provided data collection support for the study. Funding for the study was provided by UNICEF and GAIN.

REFERENCES

- UNICEF. Nutrition Glossary: A Resource for Communicators. [cited 2015/6/20]; Available from: http://www.unicef. org/lac/Nutrition_Glossary_(3).pdf.
- 2. Black RE, Allen LH, Bhutta ZA, deOnis M, Ezzati M, Mathers C, Rivera J. for the Maternal and Child Undernutrition Study Group. Maternal and child undernutrition: global and regional exposures and health consequences. Lancet. 2008;371:243-60.
- National Institute of Nutrition. Survey on Anemia and Sub-Clinical Vitamin A Deficiency. 2014. [cited 2015/06/24]; Available from: http://viendinhduong.vn/FileUpload/Doc uments/Bang4,5%20TL%20thieu%20VA,%20Iod-THDD% 202009-2010.PDF2008.
- 4. UNICEF. Nutrition Glossary; A resource for Communicators. New York, NY: Division of Communication; 2011.
- National Institutes of Nutrition. The 2014 Nutrition Surveillance System Report – National Institute of Nutrition. Ha Noi, Viet Nam: Ministry of Health; 2014.
- Phuong HN, Huong GTT. Current knowledge and practices on nutrition and anemia prevention of pregnant women from Muong minority group in HoaBinh. Journal of Food and Nutrition Sciences. 2013;9. (In Vietnamese)

- National Institute of Nutrition. The General Nutrition Survey 2009-2010. Ha Noi, Viet Nam: Ministry of Health; 2010.
- Baltussen R, Knai C, Sharan M. Iron fortification and iron supplementation are cost-effective interventions to reduce iron deficiency in four subregions of the world. J Nutr. 2004; 134:2678-84.
- Food and Agriculture Organization of the United Nations [FAO].Food Insecurity and Vulnerability in Viet Nam: Profiles of Four Vulnerable Groups. Food Security and Agricultural Projects Analysis Service (ESAF) ESA Working Paper No. 04-11. 2004. [cited 2015/5/15]; Available from: ftp://ftp.fao.org/docrep/fao/007/ae066e/ae066e00.pdf
- Khan NC, Khoi HH. Double burden of malnutrition: the Vietnamese perspective. Asia Pac J Clin Nutr. 2008;17:116-8.
- Chandy KT, Balakrishman TR, Kantawalla JM, Mohan K, Sen NP, Gupta SS, Srivastva S. Proposals for family planning promotion: a marketing plan. Stud Fam Plann. 1965:1: 7-12.
- Kotler P, Zaltman G. Social marketing: an approach to planned social change. J Mark. 1971;35:3-12. doi: 10.2307/ 1249783.
- ISMA: International Social Marketing Association. ESMA: European Social Marketing Association. AASM: Australian Association of Social Marketing. Consensus Definition of Social Marketing. 2014. [cited 2015/5/28]; Available from: http://www.i-socialmarketing.org/assets/social_marketing_ definition.pdf.
- Online Dictionary. Commodity Definition. [cited 2015/5/28]; Available from: http://dictionary.reference.com/browse/ commodity?s=t.
- 15. DKT Vietnam. Social Marketing for a Better Life. 2014. [cited 2015/5/28]. Available from: http://www.dktinterna tional.org/country-programs/vietnam/.
- GAIN.Multi-nutrient Supplements Initiative (MSI) in Viet Nam. 2015. Multi-nutrient Supplements Initiative (MSI) in Vietnam. [cited 2015/5/28]; Available from: http://www. gainhealth.org/programs/.
- Barnes J, Armand S, Callahan S, Revuz C. Using Total Market Approaches in Condom Programs, Strengthening Health Outcomes through the Private Sector Project. Bethesda, MD: Abt Associates; 2015.
- Turk T, Elkins D. Using a formative research rapid assessment method to support the development of a HIV/AIDS antiretroviral therapy communication campaign in Kenya. J Infect Dis Ther. 2013;1:120. doi: 10.4172/2332-0877.1000 120.
- Turk T,Latu N, Cocker-Palu E,Liavaa V, Vivili P, Gloede S, Simons A. Using rapid assessment and response to operationalise physical activity strategic health communication campaigns in Tonga. Health Promot J Austr. 2013;24:13-9. doi: 10.1071/HE12903.
- 20. Ulin PR, Robinson ET, Tolle EE. Qualitative Methods in Public Health: A Field Guide for Applied Research. San Francisco, Cal: Jossey-Bass; 2012.
- 21. Seidman IE. Interviewing as qualitative research: A guide for research in education and the social studies. New York: Teachers College Press; 1991.
- 22. Goodman LA. Snowball sampling. Annals of mathematical statistics .1961;32:148-70. doi: 10.1214/aoms/1177705148.
- Kitzinger J. Qualitative research: introducing focus groups. BMJ. 1995;311:299-302.
- 24. Turk T, Spohrer R, Manus C, Khan Van T, Thuy Nga T et al. Using formative research to increase purchase intention of fortified foods to prevent micronutrient deficiencies in Vi-

etnam. J Nutr Food Sci. 2016;6:540. doi: 10.4172/2155-96 00.1000540.

- 25. Glaser BG, Strauss AL. The Discovery of Grounded Theory: Strategies for Qualitative Research. Chicago; Aldine: 1967.
- Schreiber RS, Stern PN, (Eds). The 'how to' of grounded theory: Avoiding the pitfalls. In Using grounded theory in nursing. New York, NY; Springer: 2001. pp. 55-83.
- Centers for Disease Control and Prevention. Social Marketing for Nutrition and Physical Activity Web Course: Introduction. Atlanta, USA. [2016/3/15]; Available from: www. cdc.gov/nccdphp/dnpa/socialmarketing/training.
- 28. Spiggle S. Analysis and interpretation of qualitative data in

consumer research. J Consum Res. 1994;21:491-503.

- 29. Booth-Butterfield S, Gutowski C. Message modality and source credibility can interact to affect argument processing. Communication Quarterly. 1993;41:77-89.
- Andreyeva T, Long MW, Brownell KD. The impact of food prices on consumption: a systematic review of research on the price elasticity of demand for food. Am J Public Health. 2010;100:216-22. doi: 10.2105/AJPH.2008.151415.
- Ross G, McDermott L, Stead M, AngusK. The effectiveness of social marketing interventions for health improvement: What's the evidence? Public Health .2006;120:1133-9. doi: 10.1016/j.puhe.2006.10.008.