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# Nutrition and Education in an Urbanizing Nation

Molly Pritz

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# Nutrition and Education in an Urbanizing Nation

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## **Abstract**

Child malnutrition is a growing public health issue in Nepal, particularly in urban areas. Not eating enough, or not eating enough of healthy foods, can have life-long implications on development and cognitive ability. Because of its relevance to development within the country, many donor organizations and non-governmental organizations are working to promote child nutrition education programs. The purpose of this research is to investigate the implementation and structure of urban child nutrition educational programs involving treatment and prevention in Kathmandu, Nepal. Through qualitative interviews and field observations with three primary organizations, this research analyzes the patterns and disconnects between various efforts being made to design and implement educational curriculums.

Keywords: child, nutrition, education, urban, outreach, public health

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## **Introduction**

It is estimated that 41 percent of children in Nepal have chronic malnutrition, accounting for about one third of the childhood mortality in the country (UNICEF Nepal 2012). Chronic malnutrition, used interchangeably with malnourishment in the literature and this study, is an increasing problem in urban areas, commonly because of inappropriate food intake (Na 2004). As a public health issue because of its effect on the population as a whole, child nutrition is a particularly relevant topic in Nepal today. The health of the country's children has direct effects on its future, as malnutrition leads to impaired intellectual development and irreversible cognitive ability. Also, reduced productivity in adult life and up to 10 percent of lifetime earning capacity can be lost. (UNICEF Nepal 2012). The need for educational awareness has been recognized by the government, as well as many donor organizations, NGOs, field workers, and those seeking services. But, according to the literature, between these many factors, the structure allows for divergence in curriculum, goals, and implementation.

The existing system that this project investigates involves a donor organization, often with international funding working in close conjunction with the government of Nepal, at the top of the "cascade" (KC 2015). From the United States Agency for International Development (USAID) funded program *Suaahara*, meaning good nutrition, other organizations are able to obtain educational materials and implement trainings or programs on their own. This project researches one donor organization's program and three NGO's educational programs to study different techniques and tactics utilized in

promoting knowledge as a means to alleviate child malnutrition in urban Kathmandu, Nepal.

The purpose of this research is to analyze whether or not the structure described in the literature, that of materials and knowledge being transferred from a donor organization to NGO, field worker, and eventually beneficiary exists in Kathmandu, and if so, is the knowledge gap described a prevalent issue? In the process of answering this overarching research question, other questions will be addressed such as: Who designs the educational curriculum? Where is this distributed or publicized, and who is the targeted audience? What teaching methods are employed? What educational background do those filling the role of teacher have? Does collaboration occur with other nutrition-related organizations? And within each organization, are there any known gaps in distribution of knowledge from the curriculum design to the content of trainings and programs, or information received by beneficiaries?

### **Literature Review**

Based on the United Nations Convention on the Rights of Children, Nepal has worked to address the human rights concern of child nutrition, which is “considered as [sic] a basic element for attaining educational success and a healthy life” (Srinivasan 2013, 581). Since the interim constitution in 2009, the government “has provided free health services for essential health issues through health posts and subhealth posts” (Srinivasan 2013, 581). The government has had success addressing nutrition specifically by distributing dietary components such as iodized salt, Vitamin A, and micronutrient powders. “However, the government knows that in order for programs to have an impact year after year,

communities must mobilize and families must change their health practices,” (USAID 2013, 2). There is a growing trend of assisting in and supplementing government efforts to provide nutrition programs “in an attempt to meet the nutritional needs and problems of the vulnerable groups in the community and family,” (Regional 1972, 205). For example, there are a number of non-governmental organizations (NGOs), such as Nepal Youth Foundation (NYF), Nutrition Promotion Consultancy Services (NPCS) and Civil Society Alliance for Nutrition, Nepal (CSANN), working to promote child nutrition awareness to the general public, particularly in urban settings.

Maternal education plays a direct role in child nutrition, for example through the use of more health care facilities both before and after birth and through the implementation of healthier diets and sanitation practices in their households, decreasing the rate of stunting (Srinivasan 2013 and Bishwakarma 2011). According to Bishwakarma (2011), “unsafe water and sanitation and poor hygiene alone, according to a recent collective expert opinion, explains nearly 50% of malnutrition” (31). While a woman’s primary schooling will not be completed after a certain age, there are other educational programs and trainings available that can increase her knowledge in this particular subject, outside of the formal education sector. Nutrition education is also important for when a child is eventually able to make his or her own decisions about food intake later on in life; there is an importance for individuals to know what is nutritional themselves. Non-governmental organizations exist in attempts to fill in the gaps of what the government is doing, or lack thereof, in regards to child nutrition education.



Different factors contributing to nutrition levels arise in urban versus rural areas, despite the overarching public health issue. Kathmandu, Nepal was the site of a study showing that urban areas in particular are more vulnerable to poor health and malnutrition because they are characterized with high population growth rate and density, as well potentially high economic costs (Helen Keller International 2010). This density can limit the availability of healthy choices and create economic pressures, often resulting in the consumption of more unhealthy foods. With urbanization also comes diets high in sugars and fats due to the increase in risks associated with lifestyle choices (Vaidya, Shakya and Krettek 2010). Helen Keller International (n.d.) found that to prevent the continual rise in overweight and obese children, there is a need for nutrition interventions in Nepal to discourage unhealthy snacks and encourage healthier, more nutritious and affordable. Some factors impacting the implementation of healthy practices in Kathmandu are affordability of food, convenience, and amount of advice or counseling received by mothers (Helen Keller International n.d.).

The need for educational awareness has been recognized by many. Working towards alleviating child malnutrition, donor organizations include international bodies such as United States Agency for International Development (USAID). Bishwakarma (2011) argues that NGOs play a key role in community-awareness raising and mobilization, too, because of how frequently they work directly with women and children. Pant et al. (1996) argue that nutrition education is the most suitable way to improve nutrition status within high-risk populations. At the same time, though, it is difficult to implement because of the resources required. Accessibility, such as roads and technology, are limiting factors in relaying public health information. This effects how education is

delivered by limiting health professionals, even in urban areas, as often the most difficult populations to reach are also the most critical. Yet, nutrition education is vital in society development, as “an emphasis on better nutrition [is] an essential prerequisite for full manpower development” (Regional 1972, 98).

Popular throughout Nepal, public campaigns for children in schools work to teach about nutrition from a young age. “Nutrition education through schools is of particular importance, because of its profound influence on the concepts of the coming generation on foods and nutrition” (Regional 1972, 157). This prepares children for their own future dietary decision making, and potentially as parents. Additionally, in-school nutrition programs are considered by the Ministry of Health and Population and Ministry of Education (2006) to be “the cost-effective and easiest way in [sic] improving students’ health and academic performance,” if students are the desired audience (2).

Educating families is also incredibly important for recognition of unhealthy behaviors, treatment options if necessary, and prevention in the future. To reach families but avoid circumstances of illiteracy, demonstrations, television and radio are sometimes utilized to inform about and promote behavior change. Vaidya, Shakya and Krettek (2010) suggest the most appropriate way to address these concerns is through a “collaboration between governmental representatives, medical doctors, health workers, and communities” (2739). This integrated approach is also suggested by the Regional Office for the Western Pacific of the World Health Organization (1972) on how education should be presented, arguing:

It should be practical and applied, adapted to economic and agricultural possibilities and in harmony with the socio-cultural setting. Nutrition education should include effective demonstrations and sometimes

supplementary feeding of vulnerable groups, and practice by the mothers in food preparation. It can be an invaluable part of community development, both in urban and rural areas. (152)

If integration is effectively carried out, including the involvement of community members to enact support, those involved may retain up to 90% of the practical work that they are participating in (Regional 1972). One form of intensive integration is the operation of urban nutrition centers, or rehabilitation homes where children and parents go to stabilize their health and learn proper nutrition-related lifestyle choices. “These centres, although seemingly costly to establish and operate, may in fact be economical, by forestalling severe malnutrition and so minimizing the needs for hospital beds” (Regional 1972, 172). Yet, rehabilitation centers and other organizations, if operating completely independently, may not be operating in the most efficient ways. Inclusion of all key sectors is necessary, working together “in a coherent, coordinated, efficient, and effective manner,” to eliminate chronic malnutrition in Nepal (UNICEF Nepal 2014).

The Civil Society Alliance for Nutrition, Nepal (CSANN) and Scaling up Nutrition recognize the difficulty in establishing a collaboration between the various stakeholders working to combat child malnutrition at different levels. In “Advocacy and Communication Strategy,” CSANN published “this network together will function more proactively to coordinate and build institutional linkages within themselves and other external organizations in scaling up nutrition initiatives” (Civil 2014, 1). This organization was formed at the basis of eliminating gaps or misalignments between key players in nutrition information, which relates directly to curriculum distribution and teaching.

*Suaahara* compiled qualitative data internally to analyze the training cascade through different levels of trainers involved in relaying its organization's messages in the districts where it works directly. The "Frontline Worker (FLW) Qualitative Study" looked at the effectiveness of its system of information relaying, and found that there is a need for "encouragement of collaboration across the sectors to disseminate information widely," and "the coordination mechanisms are not as strong as expected," despite the wide distribution of information (Suaahara 2015, 67). This project parallels the "Frontline Worker Qualitative Study," but involves various organizations rather than just one, and is urbanely rather than rurally focused.

Despite the trend towards assisting the government in implementing practical nutrition education programs, there is little literature surrounding what methods are actually employed to educate the communities, and what communities are targeted. Information on discourse between influential bodies, as well as specific curriculum and goals of implementation in urban areas is highly limited. This project explores if there is a "gap in information flow among different stakeholders" from limited coordination and resulting in weak information sharing (Civil 2014, 9).

### **Research Methodology**

The research presented in this project was conducted in Kathmandu, Nepal, over a three and a half week period. Kathmandu is not the only urban center of Nepal, but as the capital it is a central location for many organizations whose efforts are focused on child nutrition. Of the many NGOs working to alleviate child malnutrition, three were chosen, as well as one donor organization funded program, to investigate further. Qualitative data was collected through

interviews with representatives from *Suaahara*, Nepal Youth Foundation (NYF), Civil Society Alliance for Nutrition, Nepal, (CSANN), and Nutrition Promotion Consultancy Services (NPCS), as well as through observational techniques.

In person interviews were semi-structured and interviewees were presented with an informed consent form that was signed before the interview began. The purpose of the research and option of remaining anonymous were again verbally reiterated. One interview occurred via email with a contact who had previously been met in person, and written consent was received also over email. Representatives performed different roles within the organizations, but were often providing a perspective of an overseer or director.

Observations of a radio program, event, training, and workshop were also associated with or hosted by the organizations represented by interviewees. These inactive participant observations included CSANN's "Review-Reflection and Action Plan Development" workshop, *Suaahara* radio program, a teaching session delivered to mothers at NYF's Nutritional Rehabilitation Home, and a motivational prize distribution event organized by NPCS. During each observation period, interaction between the researcher and participants was minimal in an attempt to observe the most authentic situation possible. This meant sitting behind yet amongst mothers at the teaching session, in the periphery at the distribution event, and at the large horseshoe table at the CSANN workshop with all other participants. Tuning in to the radio segment also allowed for observing from a listening beneficiary's point of view. Through an inactive participant role, the researcher was able to take notes on teaching strategies, participation, and hidden curriculum that may only be visible during such events.

These provided insight into examples of the planning and on the ground implementation of efforts taking place in urban Kathmandu.

A challenge confronted throughout the research period came in the inherent structure of the proposed research. Reaching certain populations (specifically field workers and volunteers) was significantly reliant on referral or reference from donor organizations or NGOs, similar to a snowball effect. With it being difficult to reach local, Nepal-based representatives from donor organizations, this delayed reaching those further along in the structure of implementation, which slightly changed the path of this research. Another obstacle during this study period was that of the ongoing fuel crisis in Nepal. Beyond taking up some of individuals' free time to deal with alternative transportation and cooking strategies, shortages of both cooking fuel and petrol have resulted in the closing of many offices and organizations. For example, the Nutritional Rehabilitation Home (NRH) run by Nepal Youth Foundation was closed for two weeks of the study period, and compared to its usual operation, saw very little activity when it reopened. Typically, the number of urban cases compared to rural at the NRH is significantly lower, so reaching mothers or beneficiaries during the shortage was not possible. Additionally, as a result of the fuel crisis, staff at organizations were often doing atypical work. This was sometimes either out of the region, to remain productive in a less busy time, or various administrative tasks to explain the decrease in programming, for example. This made populations of field workers, or those who typically share the curriculum in urban settings, as well as mothers, especially hard to contact within the study period.

## **Research Findings**

## **Implementation Process**

The implementation of child nutrition outreach and educational programs in urban areas depends on the structure of the organization. *Suaahara*, a United States Agency for International Development (USAID) funded program, aside from executing its own programs in 41 rural districts in Nepal, also works as an overarching resource for other child nutrition programs. Working closely with the government of Nepal, *Suaahara* creates educational curriculum based on global nutritional guidelines. Shreejana KC, Social and Behavior Change Communication Manager explained that a focus of *Suaahara*'s implementation strategy in rural areas is consistency in messages delivered. Because *Suaahara* communicates between the different levels of implementation within their own organization, there is special attention given to a "uniformity in messages" in the rural programs so that "mothers will get the same messages from everyone so that they will not be confused," (KC 2015). This cannot be ensured within the process of curriculum implementation or material usage within the urban setting studied in this research, though. Using resources made available by *Suaahara*, other organizations may choose from materials showing primary and secondary audiences, desired behavior, communication objectives, benefits, support points, and benefits, for example. These organizations, such as Nepal Youth Foundation, Nutrition Promotion Consultancy Services, and Civil Society Alliance for Nutrition, Nepal, and other establishments may interpret and implement them however they may choose to do so. The three NGOs researched all choose to design and implement educational curriculums in their own ways.

Nutrition Promotion Consultancy Services was established in 2003, before the *Suaahara* program began in 2011. Because of this, NPCCS designed their own materials and have utilized mostly internally created resources since. A few *Suaahara* materials are used, but there is a lot of overlapping material between the two. The content and layout of posters and flip charts are frequently very similar, with images of healthy foods, limited text, and signs of malnutrition, for example. With these materials, one full time and one part time staff member, trained in nutrition and nursing, work in three different urban slums at a time leading urban awareness programs. Currently, three urban community nutrition programs are operating in the Kathmandu Valley in Sankhamul, Balkhu, and Lalitpur district Ward 22. Zimmerman (2015) of NPCCS noted that working in urban areas is particularly difficult because of the “very transitory population,” that is consistently moving “back and forth between slum and the village.” NPCCS only works in areas where there are already established organizations on the ground that they can partner with, for example mother’s groups or religious organizations. Once the five year program is completed in a slum, the efforts are then turned over to trained volunteers within the community.

Nepal Youth Foundation utilizes some of both *Suaahara* and NPCCS’s materials in the programming done both at the Nutritional Rehabilitation Home (NRH) and during outreach programs. The NRH is an opportunity to both improve the health of children and educate family members about proper nutrition techniques while the child and parent live at the home, usually for a month. In both settings, after receiving training from the dietitian, nurses are primarily responsible for the teaching and informing. Cooks also have the



opportunity to be teachers, when mothers help in the kitchen to healthy food preparation techniques. When designing the curriculum and selecting elements from different accessible materials, all key players and decision-makers are present, including the president of the organization, dietitian, and nurses. The result of this, according to dietitian Sunita Rimal, Nutrition Program Coordinator, is that knowledge is then directly passed from the organizers to the nurses to mothers, so there is not a large gap in the objectives versus reality of what is taught. Awareness sessions occasionally take place in urban areas, but more the more frequent interaction with urban residents occurs when they are admitted to the NRH. While at the NRH, mothers (or fathers, if the present family member), receive formal and informal training in nutrition from nurses through classes, demonstrations, and casual discussions. During the class observed, the dietitian who leads curriculum design efforts sat in for a part of the session, which may have been a way to check in and make sure information was being presented accurately.

Kathmandu-based educational programs at the Civil Society Alliance for Nutrition, Nepal are taught by both outside professionals and school teachers. Collaboration occurs between CSANN, *Suaahara*, and NPCS, as well as other organizations, in the form of curriculum generation and materials gathering. CSANN does not focus on education itself as much as coordinating between other nutrition focused societies, but educational programs led by CSANN do exist.

### **Teaching Methods**

Every organization spoken with employed the method of using mixed mediums to convey their educational curriculum. This strategy makes curriculum more comprehensible to a varied audience. Whole community programs, such as cooking demonstrations or song competitions are encouraged by *Suaahara* to encourage as many family members as possible to participate and understand child nutrition. Utilizing previous knowledge within the community based on personal experiences to promote peer education is very common, as well as utilizing community volunteers or leaders to promote behavior change and healthy practices.

To make learning as accessible as possible, curriculum is designed to be practical, for example at the NRH, where mothers are “learning by doing” (Gahatraj 2015). This takes many forms, including mothers helping in the kitchen during food preparation time to learn from the cooks. Living at the center gives the opportunity for fewer formal teaching sessions where information is presented to the families, and more informal methods of learning, such as observation and discussions. During NPCCS programs, mixing mediums this means teaching with “group discussions, field demonstrations, practicum, posters, and flip charts,” (Zimmerman 2015). Dr. Uma Koirala of CSANN provided a list of similar answers, including verbal and visual aids such as “exhibition of posters [sic] pamphlets, video show, [and] discussion” (Koirala 2015).

The *Suaahara* produced radio program, “*Bhanchhin Aamaa*,” meaning “mother knows best,” by cuts any instances of illiteracy and accesses hard to reach populations. *Bhanchhin Aama* is available to listeners both on the radio and internet, making it a *Suaahara* resource that can directly reach urban

audiences. Tuning in to the program at 6:10 pm on Wednesday, November 18<sup>th</sup>, 2015, the accessibility of the program was shown. Calls and SMS messages from various mothers and family members were received and broadcasted or read aloud. This gives anyone with a phone the opportunity for their nutrition related questions to be answered, as a specialist was later called by the hosts to respond to inquiries made by listeners. Saturday programs feature radio dramas to draw in listeners and entertain them, rather than simply projecting nutrition related messages for fifteen minutes. The representation of Watchdog Media and the CSANN workshop also revealed a collaboration between media and educational efforts within another organization. Interactive and far reaching radio programs draw a wide audience geographically and demographically.

*Suaahara* programming focuses on the “1,000 days family,” which includes the mother-in-law, father-in-law, mother and father (KC 2015). The reasoning behind targeting all adults of the household rather than just the mother is to promote sharing responsibility. If male members are included in being educated about nutrition, they will understand that the responsibility cannot fall exclusively on the mother, or the child will suffer. For this reason, emphasizing “aspirations for the children,” is the most important message conveyed by *Suaahara* (KC 2015). CSANN also directs their programming at the entire family. One way of addressing this is through women’s advocacy, a point that was addressed at the “Review-Reflection and Action Plan Development” workshop.

Alternatively, NPCS, NYF answered the question “Who is your target audience for educational programs?” by saying the focus is put on educating the mother. But, when asked further about other family members, there was not a

discouragement of the father, father-in-law or mother-in-law to be involved in programs or trainings. At the NRH, for example, it is simply that mothers are usually the family members who accompany children to the home for the rehabilitation. Regardless of who the curriculum is designed to teach most directly, the idea of integrated learning methods is consistent throughout all organizations represented.

This multisector approach was discussed at the CSANN workshop, for example how women's advocacy, and encouraging other family members to take responsibility for the child and family's nutrition, can help to alleviate child malnutrition. If a mother is given a more generous maternity leave from formal work, she is more likely to complete breastfeeding which will ultimately improve the nutritional status of the child. Both *Suaahara* and CSANN emphasized that integrated curriculums surrounding good sanitation and agriculture practices can also improve nutrition, even in urban areas.

Incentives as motivators to encourage participation in educational programming is a technique used by both *Suaahara* and NPCS. *Suaahara* provides an outline for "ideal family recognition," in which a family is acknowledged at a community event if it meets 5 of 7 criteria (KC 2015). This method rewards and encourages the recognized family to keep up their good practices, and challenges other families to achieve the status themselves. This is employed in the communities that *Suaahara* works directly in, but the model and resources can be adapted to be implemented in urban settings. Similarly, through a "Healthy Baby Competition," NPCS recognizes community members who have been regularly participating in and taking advantage events and services offered in their slums. Observation of this program revealed that the distribution of

blankets to families was greatly appreciated, though the turn out to this event was lower than usual participation numbers. Encouraging participation through recognition also helps reveal to the organizations the effectiveness of their programs, based on data collected for the competition or assessments determining if criteria have been met.

In addressing the structure of implementation of child nutrition educational programs as a whole, there were no expressed worries of misinterpreted or misrepresented information in the distribution of knowledge regardless of who creates the curriculum versus who interacts with beneficiaries directly. Based on the structure of organizations, there are individually more or fewer opportunities for a knowledge gap to occur.

### **Curricula**

Despite the fact that malnutrition is prevalent in urban areas, there is still a lack of knowledge regarding nutrition that NYF, CSANN, and NPCCS work to address through their educational programming. “Sometimes the parents don’t want to come here for the treatment because of the lack of awareness,” when they don’t necessarily realize their child is unhealthy (Gahatraj 2015). When surrounded by other people who are stunted, “community people don’t realize they are stunted themselves so they think they are fine,” or that it is genetic and normal (KC 2015). Although in the urban areas people are often considered more formally “academically distinguished,” they are often not educated in proper nutrition and make poor decisions regarding food quality and intake (Gahatraj 2015). One of the main causes of child malnutrition in urban areas is the availability, appeal, and consumption of junk food. Packaged food also is

related to social status in urban areas, meaning “if a child shows up with *dalbhat*, others will say they are too poor to afford the junk food” (Gahatraj 2015).

For this reason, there is a focus in many curriculums on the consumption of healthy, locally available food. At the NRH, teaching usually takes place in informal settings. For example, “at dinner a nurse may ask, ‘Why no *achaar* today?’” asking mothers to briefly explain the reasoning behind a pickled dish not being served that day (Rimal 2015). Other components of the informal curriculum include mothers living at the center taking a part in the cooking to learn about the best way to prepare foods and preserve the nutrients. This curriculum is not necessarily prepared or written out before hand, but more demonstrating and practicing knowledge that will be applicable when the families return home. Sometimes, curriculum is determined by the beneficiaries themselves, through the peer education techniques previously discussed in “Teaching Methods” and based on any questions or previous knowledge they may come to the home with. This was made clear during an observed teaching session at the NRH, when mothers shared with the group how they would cook certain vegetables or asked their own questions regarding breastfeeding, for example.

During the same teaching session at the NRH, the nurse teaching frequently asked, “*gaaumaa paainchaa?*” meaning “available in the village?” to inquire if the food displayed was obtainable in the villages where these women usually live. This is an example of how NYF accommodates the curriculum for the students, a tactic also used in NPCA urban-based programs. The materials used aren’t specified between rural and urban cases or populations, all that

changes is how it is taught and implemented. If teaching urban and rural based mothers at the session observed, “*saharmaa paainchaa?*” or “available in the city?” may have also been asked, to inquire if certain foods are accessible in the city. This teaching session, though, focused on practical tools that women can remember and use when they leave the NRH and return to their homes.

Curriculum at the NRH typically does not involve specific details of nutrition training, such as discussions of micro and macro nutrients. Based on observations of a “Healthy Baby Competition” hosted by NPCS and viewing various educational materials, other organizations also avoid these very specific topics of nutrition training.

In NPCS community nutrition programs, there is also not a specific curriculum, but programs cover topics such as “nutrition for pregnant mothers, lactating mothers, local food and how to use for preservation and storage, hygiene, [and] birth monitoring,” which are topics covered by all organizations represented (Shrestha 2015). Community nutrition programs take place in the slums themselves, a characteristic that differs from CSANN’s urban programs, hosted in the CSANN building classroom.

### **Cultural Influences**

Curriculum can also be embedded in cultural practices. *Suaahara* promotes this in rural and urban areas by encouraging traditional practices such as visiting a pregnant mother with a small gift of food or visiting the family’s home after a baby is born. During this time, *Suaahara* encourages women to visit together and insert messages about healthy practices from their own experiences throughout the stay. With the whole family present, they can address the mother’s work load, for example. Instead of ordering the mother what to do, they

can encourage other family members to play an active role in the pregnancy and raising of the child, indirectly advocating for the woman.

In Nepali culture, the mother typically tastes the food she has cooked before serving her family, another cultural practice that is confronted when discussing nutrition. It is imperative that she wash her hands first, as to not contaminate the dish. Sanitation habits are strongly encouraged as part of integrating different sectors and stakeholders in nutrition. With improved sanitation practices, all family members will be healthier. The mother eating food last is a cultural tradition that may be challenged in awareness campaigns or educational programs. The health of a pregnant and lactating mother is vital to a child's development, so when she may not be receiving adequate intake or nutrients by eating last, the health of the child suffers as well.

Inserting messages into cultural practices and promoting healthy behavior through informal discussions is also an example of peer educating, a method of teaching that all organizations said is used when possible. Using personal experiences and community members, rather than outside perspectives is often a very effective way of promoting social and behavior changes within a household and community.

### **In-School Efforts**

Educational programming in school is not the main focus of any of the organizations represented, but it is an additional component at CSANN, NYF and NCPS. In an attempt to teach children directly about behavior change, NYF visits schools a few times per year and teaches about developing healthy habits. NPCS takes a slightly different approach, by training teachers before-hand in nutrition, and then the teachers are equipped to teach their students and integrate



it into lessons. CSANN's in school programs are also taught by school teachers themselves. This does not allow for supervision of curriculum implementation, but utilizes community resources as a way of distributing knowledge.

## **Discussion**

Through observations and interviews, it became clear that structure of implementation studied in the Frontline Worker Qualitative Study and described in the literature differs from the structure in urban Kathmandu. Interviewing representatives from NYF, NPCS, and CSANN revealed that urban child nutrition programs are not operating through such explicitly clear populations with set roles. For example, the combined roles of cook or nurse and teacher at the NRH, and the use of teachers in schools to distribute information to children, exist in a grey area between roles. This suggests that the category of "field worker," often referred to in the literature as a volunteer originally from outside the receiving community, is relatively nonexistent in the structures of organizations studied in urban Kathmandu.

The imperative need for collaboration described in the literature does exist within the organizations represented. The presence of many decision-makers when generating NYF's curriculum, the coordination between the dietitian and nurse in implementing that curriculum, the encompassing role of NPCS's community nutrition program staff members, and the overlap of materials between organizations are examples of the cross-checking that occurs between different efforts working towards alleviating child malnutrition.

There is potential for information gaps to occur, but based on the attitudes of organization representatives, it seemed that if any information reaches beneficiaries, that is viewed as better than no information at all. There were not

expressions of worry that incorrect or misinterpreted information would be shared, as a main focus is promoting awareness about child nutrition and healthy practices. Additionally, using mixed mediums and integrated techniques in teaching allows for messages to be conveyed in various ways with overlapping messages. Among the organizations, all with different program locations and specialties, there were a lot of shared teaching practices, such as using visual aids, demonstrations, and utilizing community members to access populations. Target audiences varied slightly, but all organizations at least mentioned trying to work with mothers. Similarly, teachers of awareness or training sessions also played different roles, such as nurses or teachers, but all have received some sort of nutrition training, whether within the organization itself or as a part of their formal education.

Collaboration is occurring with schools, and teaching children directly, “the cost effective and easiest way” to improve health and academics, is taking place, ultimately contributing to the betterment of the society as a whole (Ministry 2006, 2). While working with children is on the agenda of the organizations represented, there is a challenge to balance prevention and treatment in order to eventually eliminate child malnutrition from the country of Nepal. The location of efforts exemplifies this. NYF is the only organization with treatment centers in Nepal, so it is channeling most of its efforts into treatment of children while hosting them at the center. The ultimate goal is reducing malnutrition, which requires both treatment in prevention. At NYF, in school programming does occur, but is not the emphasis of the organization’s programming. CSANN and NPCS also work directly with children, but again,

children are not the focus of their efforts, as is displayed in the answers to who their desired audiences are.

The practicality and effectiveness of working with community members or volunteers is utilized by NPCS in particular, as the program is eventually turned over to the community. Despite the challenge of accessing populations in the slums due to the transient populations, a reason not noted by Pant et al. (1996), the structure of implementation draws upon community members as aides in operating community nutrition programs. This structure reflects an argument by the World Health Organization (1972), that nutrition education programs “can be an invaluable part of community development” (152).

These findings surrounding the structures of information sharing in urban Kathmandu compared to the rest of the literature may be explained by the scales of both research and educational programs. *Suaahara* is an internationally well-funded, extensive program operating throughout Nepal. Comparatively, NPCS’s community nutrition programs are also internationally funded, but operate on a budget from the United Methodist Church Advance donations in the United States. The urban education program, as a branch of NPCS’s work, employs only one full time staff member, whereas *Suaahara*’s structure contains many more decision-makers. This means that information changes hands many more times in the large organizations often referenced in the literature, compared to smaller organizations with more concentrated efforts.

This data is not generalizable, though, as it only investigates the implementation of three organization’s educational programs. It is not representative of the entire population of NGOs operating child nutrition educational programs in Kathmandu or in any urban centers in Nepal.

## **Conclusion**

This research suggests that the efforts in urban Kathmandu working to alleviate child malnutrition, although implemented in different settings and by different stakeholders, revolve around many of the same materials and teaching strategies. The use of community organizations, from mothers' groups to schools, is a common strategy used in accessing hard to reach populations on the ground and making knowledge accessible to all. This consistency, created by collaborations between organizations, is vital in providing uniformity and clarity in the messages delivered to the recipients of information.

Because child nutrition and "health related issues are sometimes by cut by development issues," there is not an expressed worry that the information reaching mothers, children, and entire families is misinformed or misinterpreted (KC 2015). With urban education programs typically constitute a smaller section of organization's agendas compared to rural or treatment programs, it seems that any information rather than zero information reaching communities is a step in the right direction.

Further research should be conducted to analyze child nutrition education programs in other urban centers in Nepal, such as Pokhara or Butwal. Additionally, data should be collected on more NGOs or other organizations working to alleviate child malnutrition to make the data more generalizable. Within many organizations, individuals in various positions should be interviewed to provide more perspective.

Overall, many organizations are proactively working to address a growing public health issue and with continued efforts and involvement in both rural and

urban areas, treatment and prevention may eventually virtually eliminate child malnutrition in Nepal.

## **Glossary of Terms**

CSANN- Civil Society Alliance for Nutrition, Nepal

NGO- Non-governmental Organization

NPCS- Nutrition Promotion Consultancy Services

NRH- Nutritional Rehabilitation Home, part of Nepal Youth Foundation

NYF- Nepal Youth Foundation

*achaar*- pickled vegetable preserved in spiced oil

*Bhanchhin Aama*- Mother knows best

*dalbhat*- traditional Nepali meal of rice and lentils

*gaaumaa paainchaa*- available in the village

*saharmaa paainchaa*- available in the city

*Suaahara*- good nutrition

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