

***Nun Chini Pani*—a Culturally-Sensitive, Visually-Creative Communication Campaign to Reduce Diarrhoeal Deaths in Nepal¹**

Arvind Singhal* and Yuki Azaad Tomar

Which medicine has saved more lives than any other and can be made by anyone in their kitchen....[or] a shantytown hut—as long as they have access to clean water? The answer is: eight teaspoons of sugar, half a teaspoon of salt and one litre of water. Mix. Drink....It requires no specialized equipment; uses ingredients that are ubiquitous and have a long shelf life; has few side effects; and can be made up in any quantity—the perfect medicine.”

- British journalist, Jeremy Laurance²

Introduction

One of the great achievements of humankind in the past 50 years is the precipitous global decline in the mortality of children below 5 years of age (UNICEF/WHO, 2013). In 1960, almost 1 in five children died of preventable causes; by 2015, the number had dropped to 1 in 24. In the past 50 years, countries such as Brazil and China have reduced their child mortality rates over 10-fold, and even in countries of Sub-Saharan Africa, child mortality has declined from 1 in 4

children 50 years ago, to less than 1 in 10 in 2015 (Roser, 2016).

While many factors explain this decline in childhood mortality, including improved standards of living, rise in educational levels, and increased access to immunization and health care, a significant contributor of this decline is the widespread use of oral rehydration therapy (ORT) to combat diarrhea. In 1980, nearly five million children under 5 years died each year from diarrhea; in 2000, this

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figure had dropped to 1.8 million. By 2015, despite 2.5 billion bouts of diarrhea among children under the age of five, annual diarrhoeal deaths were at about 1 million (UNICEF/WHO 2009; 2013). ORT has helped save an estimated 50 million children's lives from diarrhea over the past five decades (Fontaine, Garner, & Bhan, 2007), and it is no surprise that the medical journal *Lancet* called it "potentially the most important medical advance of this [the 20th] century."³

In the present article, we describe and analyze the experience of one country—Nepal—in launching a culturally-sensitive, visually-creative social mobilization and behavior change communication campaign to promote the adoption of ORT (ORT includes the use of oral rehydration solution [ORS] along with continued breastfeeding during the time of diarrhea). While the Nepali ORT campaign—called *nun chini pani* ("salt sugar water")—occurred some 30 years ago, and is widely regarded as a "breakthrough" communication campaign (Singhal, 2008), its culturally-sensitive, visually-creative elements have not been previously documented or published in one place. A few reports, documenting some facet or the other of this campaign, can perhaps be dug up in dusty archives of global development agencies, but the project is largely forgotten, if not totally erased from data vaults and memory banks. So, the modest and humble purpose here is (1) to bring *nun chini pani* alive again for students, scholars, teachers, and practitioners of communication and social change, (2) to especially highlight

its innovations in cultural sensitivity and visual literacy, and (3) to distill some key lessons learned about effective communication campaigns.

While we did not play any direct role in the programmatic or evaluation components of *nun chini pani* when it was implemented in Nepal in the mid-1980s, we learned about this life-saving campaign during 2007-2008 when author Singhal was asked to conduct a historical global analysis of UNICEF's "breakthrough" efforts in communication for change (see Singhal, 2008). Data-sources for this piece included an analysis of (1) archival reports made available by UNICEF and Worldview International Foundation (WIF), the two agencies that collaborated on this campaign, (2) personal interviews carried out by both of us over a two-week field visit in Nepal in January 2008 with some two dozen key officials, artistes, and practitioners involved in *nun chini pani*, and (3) photo documentation of key campaign events, artifacts, and outcomes. While the narrative that follows benefitted greatly from two iterative rounds of cross checking and feedback from key principals involved in the campaign and from UNICEF colleagues interested in its documentation, the opinions expressed here do not reflect the opinions of the concerned agencies.

Nun Chini Pani: The Life-Saving Elixir

Among the predominantly Hindu population of Nepal, the epic poem, *Ramayana*, is an integral part of peoples' cultural and religious ethos. In the poem,

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when Lakshmana, the brother of Lord Rama, is wounded, Rama's disciple Hanuman flies to the Himalayas to obtain the medicinal herb *Sanjeevani* (literally "one that restores life"). Unable to identify the *Sanjeevani* among other herbs, Hanuman wrests the entire mountain from the land and carries it back to save Lakshmana's life.



The opening sequence of the ORT video in Nepal shows Hanuman bringing back Sanjeevani.

Between 1984 and 1987, in the country of Nepal, nestled among the Himalayan mountain peaks in South Asia, another kind of *Sanjeevani* was being promoted to prevent the needless deaths of 45,000 young children dying each year from diarrhoeal diseases. The life-restoring *Sanjeevani*, in this case, was a homemade solution of *nun chini pani* ("salt sugar water"), technically referred to as oral rehydration solution (ORS).

Partnering with Worldview International Foundation (WIF), UNICEF played a leading role in planning,

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designing, and implementing this *nun chini pani* initiative in Nepal, which helped reduce the number of annual diarrhoeal deaths from 45,000 children in the mid-1980s to 30,000 by mid-1995. By that time, 96% of all Nepalese households were aware of the oral rehydration solution, a remarkable accomplishment in a country where the reach of mass media (at least up until the early 1990s) was fairly limited.

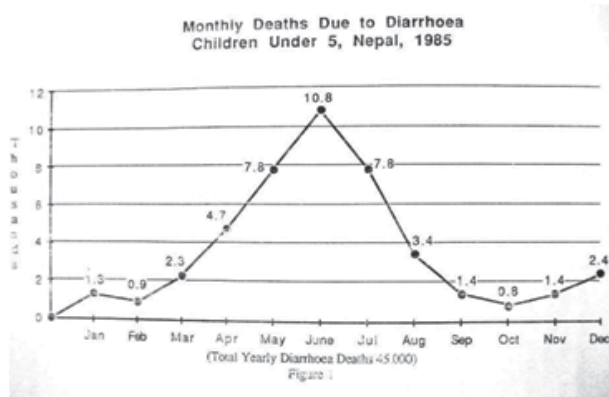


Launch of the Nun Chini Pani Campaign with a poster and banner-decked elephant roaming the streets of Kathmandu

Reframing Traditional Healers: Hindrance to Ally

When the *nun chini pani* campaign got underway in 1984, the mass media infrastructure in Nepal was severely limited: no national television, few radio sets, and a highly illiterate population (fewer than 20% of women could read). The dispersed and remote location of so many of Nepalese', and a paucity of trained medical personnel in rural areas, meant that the 400,000 *Dhamis* and *Jankris* (traditional healers) were highly sought after by families of sick children,

especially during the monsoon season, when the cases of diarrhoea peaked. When plotted on a graph, this seasonal variation in the frequency of diarrhoea cases looked like a Himalayan mountain peak.



Diarrhoeal deaths in Nepal peaked in the monsoon season

The traditional healers, highly respected by the ordinary citizens of Nepal, insisted on withholding liquids from the children suffering from diarrhoea, advice that was counterproductive to restoration of health, and often fatal. The logic was *nothing goes in, nothing comes out*. Research revealed that, for four months of the year, an estimated 400,000 well-intentioned traditional healers were giving the wrong advice eight to 12 times a day to Nepalese families⁴.



Dhamis and Jankris, influential traditional healers in Nepal

The campaign's biggest challenge was to educate the traditional healers in Nepal, without alienating or upsetting them, to provide the correct information to families of sick children, while concurrently promoting the use of ORT. Echoing the attitude of most Western medical experts, the professional medical community in Kathmandu perceived these healers as dangerous quacks. However, the campaign team grasped the importance of enlisting the 400,000 *Dhamis* and *Jankris* as allies in this campaign. Their influence among the common people, especially about health issues, was enormous; the challenge was how to tap it and then "ride" it.

One of the campaign goals was to increase the use of oral rehydration therapy by promoting a homemade solution of *nun chini pani*. A palmful of sugar, plus a three-finger pinch of salt in three standardized tea-glasses (omnipresent in Nepal) of water was agreed to be a reasonable rehydration mixture. The key would be to creatively convey the information on how to mix the home solution correctly, have people do so, and then for them to teach others who did not know: an ambitious exercise in a country with high rates of illiteracy, mountainous terrain, and highly dispersed population.

How to train and reach the 400,000 traditional healers? Who would have credibility and influence over them? The answer: Nepali Gurkha soldiers, retiring from British Gurkha Regiments, returning to Nepal to live in their home villages.

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Why not train them in the preparation of *nun chini pani* before they returned to their villages? They could in turn gather the local traditional healers together and teach them how to mix the homemade solution. Given the influence, respect and credibility wielded by the Gurkha soldiers, and given their close ties with their home villages, this opinion leaders influence strategy for the traditional healers, as well as the common people, could push ORT to the country's remotest corners. Over a period of three years, with the approval of the British and Nepalese Gurkha Regiments, retiring Gurkha soldiers were trained in the intricacies of mixing *nun chini pani*, becoming the vectors through which the traditional healers and ordinary citizens were trained in remote locations.



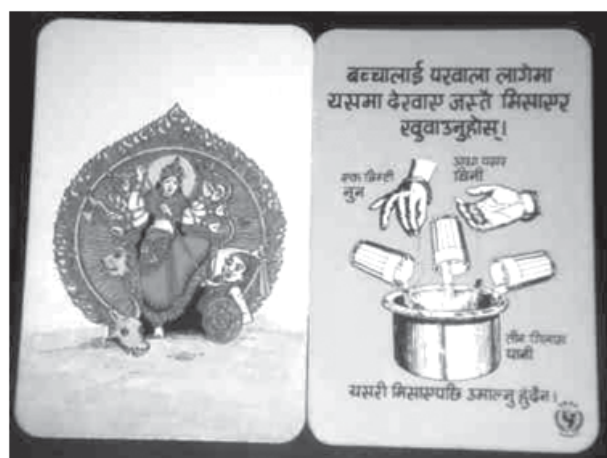
Retired Nepali Gurkha soldiers in Nepal undergoing training in how to mix nun chini pani

Visual Literacy Innovations

A remarkable aspect of *Nun Chini Pani* was the various innovations in the practice of visual literacy, given the non-literate environment of the remote and rural population. For instance, among the

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Gurkha's arsenal was a special memory card, designed and developed for them to use and to distribute to traditional healers. It visually demonstrated how to make the home solution. Over 250,000 of these *nun chini pani* memory cards were printed on heavy stock paper with an image of Durga, the goddess worshipped by traditional healers. The image of the deity ensured that the card was not thrown away. When I interviewed Raju Dahal of Worldview International Foundation (he was intimately involved in the design and implementation of this campaign) in January 2008, he noted that these cards could still be found in people's homes, some 24 years after the campaign was launched.



The front and back of the sturdy cards with an image of the deity Durga and instructions on how to mix nun chini pani

For instance, some 250,000 meters of the traditional Dhaka pattern cloth was printed (using wooden blocks) with visual instructions on how to mix ORS. This *nun chini pani* cloth was used to make umbrellas for health workers and Gurkhas, curtains in health posts, shirts for young

mothers and rickshaw pullers (so that the passengers sitting behind could learn about the home solution), and also small vests so that children visiting a clinic would be given a vest with the instruction for ORS across the very stomach that was suffering.



The nun chini pani clothes with instructions on mixing ORS

Another innovative experiment in visual literacy involved creation of posters with life size illustrations of both the amounts of sugar and salt as well as the size of the glass (the standard tea glass in Nepal) required for the ORS mix. People could measure the size of the glasses to be used against the poster. Research and strategic thinking even went into the choice of colors for the posters: orange to appeal to the relatively more traditional, older people; and blue to appeal to the younger, more urban audience.



A Poster with Life Size Illustrations of the Ingredients Needed for the Home Solution

The designs of almost all *nun chini pani* materials (posters, cloths, cards, stickers and the like) benefited from the results of a study of “visual literacy” that was carried out by UNICEF in Nepal under the leadership of Ana Haaland in the 1970s; later, this knowledge base was expanded and further developed under the leadership of George McBean, Programme Communication Chief in UNICEF’s Nepal Office in the mid-1980s. Their work and experience emphasized that people’s visual awareness skills improved significantly after they were taught how to “read” pictures. Such knowledge, once discovered and operationalized, led to the production of more appropriate and high quality project materials, especially for non-literate audiences.⁵ An interesting finding of these visual literacy

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experiments in Nepal was the discovery of the powerful impact of animation on audiences.^{6,7} Animated images that could help explain how things worked, especially through comic characters, captured audience interest. This worked well in depicting sensitive topics such as sanitation, abuse and sex.

Amplifying Through Media and Social Mobilization⁸

The mass media component of *nun chini pani* was launched on Radio Nepal with a theme song performed by Nupur Bhattacharya, a popular singer, and accompanied by several Public Service Advertisement (PSA)s⁹ about how to mix the home solution.¹⁰ The theme song was also visualized (put onto video) and broadcast on national television (just getting underway in the Kathmandu Valley). The three-minute video was titled *Sanjeevani*, and the opening sequence (as depicted in a previous photo) included a mythological image of Hanuman returning to save Lakshmana's life. In a predominantly Hindu country, such epic images can evoke primordial resonance about the life-restoring qualities of *nun chini pani*.

While the *nun chini pani* mass media campaign was blanketing the Himalayan airwaves, and retiring Gurkhas promoted the home solution both with traditional healers as well as the families of sick children, mobile ORT teams (comprising four to five people) were recruited, trained and sent from district to district to demonstrate how to mix the home solution. These demonstration sessions,

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lasting for an average of two hours, invited audience members to the stage to prepare the ORT solution themselves, thus affording numerous opportunities for repeating and reinforcing the correct way of mixing the home solution, as also administering it. In closing, the mobile team members would encourage those who attended to share their know-how with others, and sent them home with posters and with the Durga memory cards. Some 2,000 public demonstrations, each involving direct contact with 200 to 300 people, were carried out far and wide in Nepal. With Nepal's population estimated at about 16 to 17 million in the mid-1980s, an estimated 3 to 4 per cent of the population directly encountered a mobile team demonstration. In addition, a cadre of several hundred boy scouts and girl guides in Nepal (out of the 40,000 scouts and guides) conducted hundreds of ORT demonstrations, especially in schools, playgrounds, and other locations where young people gathered.



A demonstration on how to mix ORS in a remote area of Nepal

Further, some 32 women's organizations were mobilized all across Nepal to promote the *nun chini pani* initiative, including the Lions Club, Ex-Army Wives Association as well as the Police Women's Association. Further, the Director General of Nepal's postal system wrote a personal letter to all 26,000 mail carriers in Nepal to spread the word on the home solution. Given these mail-carriers covered practically all households in Nepal, in terms of their involvement greatly, aided the campaign's mission.

Two of Nepal's most famous comedians – Madan Krishna and Hari Bansha Acharya (known as the *Ma-Ha Jodi*, or “pair”) – adopted the campaign and put *nun chini pani* instructions on their audio tapes, in their live performances, on their radio programmes, and on videos of their puppet performances.¹¹ Their popularity helped get the ORT messages into countless households. When the present author-Singhal, met them in Kathmandu in January 2008, the modest *Ma-Ha Jodi* conceded that where health workers might have difficulty gaining entrance, the routines of the two beloved comedians were welcomed into Nepali homes.



Hari Bansha (Left) and Madan Krishna (Right) doing a comedy routine for television.

Life-Saving Outcomes

Several mid-term and summative assessments¹² of the *nun chini pani* campaign (1984 to 1987) were carried out in Nepal. The key findings: some 85 per cent of the people in Nepal had heard about *nun chini pani*, of which three out of five people heard it on the radio, and some 20 per cent from their neighbors. One in three families said they actually tried to make the home solution, and one in three could accurately describe the right mix of ingredients. An estimated 40,000 lives of children under the age of five were saved during the three years the *nun chini pani* campaign ran (Singhal, 2008), and its ongoing ripples year after year have saved an estimated half-a-million Nepali children in the past three decades. While the use of ORT has waxed and waned in Nepal in the past several decades, in 2015, ORT was still the first line of defense from diarrhea in 40 percent of the cases (UNICEF/WHO, 2009; 2013).

The studies also pointed out that the home solution was not guaranteed to be mixed properly by everyone who was taught, and the recall of the mixing technique diminished with the passage of time. Given the dangers of preparing and administering an “incorrectly” mixed solution (for example, if one mistakenly reversed the amount of salt and sugar, the “life-saving” potion could prove fatal), it was useful for UNICEF and other local health partners to expand the range of options offered to the caregivers of a child suffering from diarrhoea. Additional

possibilities included continued breastfeeding during diarrhoea episodes, using pre-mixed ORS packets, and using substitutes such as salted rice water or sweetened tea with salt, available in almost all Nepali homes.

Conclusion

Our purpose was to bring back to life the culturally-sensitive and visually-creative elements of the Nepali life-saving *nun chini pani* campaign to communication students, scholars, and practitioners.

What key lessons were learned from the *nun chini pani* campaign?

1. Large-scale social mobilization initiatives benefit from a strategic integration of mass media and interpersonal channels, aided by a trained network of ground-based opinion leaders who command influence, respect and credibility in their peer group. The retired

Gurkha soldiers in Nepal fulfilled this role admirably.

2. A culturally-grounded understanding of local barriers and resistances (e.g. the prevailing beliefs of traditional healers), as well as of potential allies and “entry points” (e.g. Gurkha soldiers) can be gained through research and dialogue. Such findings were crucial in crafting low cost, high impact solutions in Nepal.

3. Crafting messages in local, cultural, and religious contexts of understanding amplifies audience resonance and receptivity. The use of Durga memory cards and the “epic” alignment between *nun chini pani* and *Sanjeevani* was critical to harness and ride the existing sensibilities and undercurrents.

4. For communicating with non-literate populations, the know-how about visual literacy techniques must be systematically shared and harnessed to its full advantage. Such was done remarkably in the *nun chini pani* campaign.

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Endnotes

- ¹ This case draws upon Singhal (2008, unpublished), reports and pamphlets about *Nun Chini Pani* provided to us by Worldview International Foundation (WIF) and UNICEF Country office in

Kathmandu, and a non-dated manuscript provided by author George McBean titled 'A Solution Worth Remembering.' *Innovative Communications and Oral Rehydration Therapy in Nepal*. McBean scanned and shared this manuscript with author Singhal via email on August 29, 2007 and also provided several campaign photos from his archives, including a few that are used here. It would not be possible to reconstruct the salient elements of this campaign without the back-and-forth with McBean (formerly UNICEF's Programme Communication Chief in Nepal during the time of this campaign) and the personal courtesy extended by Raju Dahal of WIF in Kathmandu, who also dug up various materials on the campaign from dusty data-vaults, and allowed us to photograph key aspects of the campaign, including a screenshot of the ORT video with Hanuman bringing back *Sanjeevani*, the life-size poster on ORT, and the *nun chini pani* clothing (all embedded in the case). We are grateful to the Ma-Ha comedy team of Madan Krishna and Hari Bansha Acharya, who gave generously of their time in Kathmandu. Our deepest gratitude to the (former) programme communication staff in Nepal's UNICEF regional and country offices including Dutta Tray Roy, Sharad Ranjit, and Deepa Pokharel, for their insights. Gratitude also to the then UNICEF C4D colleagues in New York—Rina Gill, Robert D. Cohen, and Ketan Chitnis—who inspired and supported this inquiry in the first place.

² See Jeremy Laurance's Top Ten list on life-saving medical breakthroughs. <http://www.independent.co.uk/life-style/health-and-families/health-news/the-greatest-eureka-moments-419452.html>

³ See the *Lancet* quote here: http://scienceheroes.com/index.php?option=com_content&view=article&id=65&Itemid=113

⁴ Gleaned from George McBean undated manuscript.

⁵ George McBean reinforced this point in his email memo of March 16, 2008: The quality of the communication materials that were produced in Nepal for this campaign was very high and, I believe, were a large part of the success of the project. Even in today's world they stand out as good examples.

⁶ Especially on non- and pre-literate (people who belong to a culture where there is no written language in their environment) audiences, although animations are also popular among literate populations.

⁷ Gleaned from George McBean undated manuscript.

⁸ Data for this section (on demonstrations and social mobilization) were gleaned from pamphlets and reports provided by the Worldview International Foundation.

⁹ The PSAs included a jingle of the theme song to breed familiarity with campaign materials.

¹⁰ Part of the radio message's appeal was an invitation to the audience to help join in this campaign and spread the knowledge of ORS to save children's lives. Many of the best ideas for the promotion of *nun chini pani* (which we detail later) came from the public themselves.

¹¹ Personal interview with the Ma-Ha Jodi in Kathmandu on January 13, 2008.

¹² Data for this section were gleaned from pamphlets and reports provided by the Worldview International Foundation.

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