Using the School System to Promote Health among Children, their Families and Communities

CASE STUDY

Save the Children

CREDITS

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Save the Children

Managua, Nicaragua
2017

Project title:

Using the School System to Promote the Health of Children, their Families and Communities

Acronyms

MINSA	Ministry of Health
MINED	Ministry of Education
CCM	Community Case Management
SC	Save the Children
SILAIS	Local Comprehensive Health Care System

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Executive Summary

Children have a fundamental human right to health, which in the full sense of the word, carries implicit the enjoyment of conditions that allow them to grow and develop in a context of physical, emotional and social well-being (WHO, 1946, p. 1) and the guarantee of free and quality care leading to the prevention of disease, the promotion of health and treatment and rehabilitation in case of illness (Child Rights Committee, 2013, par. 3).

The Nicaraguan state and society have made progress as regards improving the main child health indicators. Notwithstanding the foregoing, there persist challenges that are currently being attended through public policies that call upon all sectors and social actors to join initiatives already underway to ensure girls and boys are able to exercise their right to health.

Save the Children (SC), within the framework of its objective of contributing to the health of children under five years of age living in remote communities, has joined the effort to prevent diseases of school-age children. The antecedent of this effort is the commitment of the Education Program to ensure quality learning environments. Hence, the Health Program, with the school health component, extended its coverage to girls and boys studying basic education, contributing to the strengthening of their knowledge about the main problems related to health and nutrition in their schools, homes and communities, to adopt good disease prevention practices and to position themselves as active health promoters in their immediate environment.

In this context, a case study took place at the Luz de Bocay and José Adán Vásquez schools, located in the municipalities of El Cuá and San José de Bocay, respectively. In the first, the project had two years of implementation and in the second, two months, a situation that favored the comparative analysis of the effects of the project's performance.

The main objective of the case study is to determine how girls and girls apply their knowledge to prevent diseases and take measures to improve their health, that of their family and community.

Considering its objective, the case study answers the following questions: How do girls and boys promote their knowledge about health in their families and communities? What is the reaction of their families and communities to their actions in promoting health? What disease prevention measures are they assuming for themselves, their family and their community? What are the changes in relation to health care practices? What are the differences related to the application of knowledge in the two schools selected?

The case study took place using a number of qualitative techniques, such as research among secondary sources, interviews with key actors (school principals, staff and health brigade members), entertaining and participatory workshops with children, focus groups with teachers and non-participant observation at the schools.

The schools selected for the case study are both located in rural areas whose inhabitants are poor and dispersed. It rains during most of the year and access to health units is difficult. These conditions have their effect upon the children’s health, and cases of diarrhea, fever, grippe and dengue are frequent. In one of the communities, (Francisco Estrada) leishmaniasis is also found.

The School Health Component, which is part of educational and health policy, works to develop a social-educational process through which girls and boys learn to identify diseases that affect them personally (or members of their families and communities), understand what causes these and are able to prepare a Plan of Action designed to promote changes in behavior leading to prevention.

The case study found that girls and boys have in fact strengthened their knowledge concerning health care, specifically as regards those illnesses that affect them and the individual and collective ways in which they can contribute to prevent their occurrence. The most relevant lessons learned are in the area of personal hygiene, the prevention of diarrhea and vector-borne diseases, as well as the ability to recognize symptoms. Having this knowledge has helped girls and boys incorporate a set of practices to their daily lives leading to adequate health conditions and disease prevention.

The acquired knowledge has favored a change of attitude that is expressed in a predisposition to assume practices for the prevention of diseases and health care. Attitudinal change has contributed to girls and boys incorporating into their daily lives a set of practices that favor an adequate state of health and the prevention of diseases.

At home, their practices encompass personal hygiene practices (hand-washing, cleaning the house), proper handling of food items (washing produce and fruit) and preventing the spread of diseases (chlorinating water, eliminating mosquito breeding grounds). At the schools, the most frequent practices being implemented are hand-washing, keeping classrooms and school grounds clean, and eliminating mosquito breeding grounds. These actions have contributed to preventing diseases and have the positive collateral effect of reducing school absenteeism.

Collective health care practices in community spaces are less frequent and were noted only at the Luz de Bocay School, this situation is attributed to the fact that the collective action for health promotion is conditioned by factors that exceed the performance of the project and its recent implementation in the José Adán Vásquez School.

In general, changes in behavior are exerting an influence by reducing the occurrence of illnesses that affect school-age children, in particular diarrhea, stomach infections and vector-borne diseases. These changes originate at the schools (hand-washing, adequate waste disposal practices) and from there find their way into people's homes, where the girls and boys propitiate their adoption among family members and even others in their communities.

In addition to changes in behavior, girls and boys share what they learn with their peers at school, family members and other persons in their communities, thus positioning themselves as vital actors in the promotion of healthy practices. This means they learn to participate in matters that directly affect them and earn positive assessments from community members.

Despite these advances concerning the children's knowledge, all actors consulted noted that only some of the children put what they learn into practice. This is understandable, as there is no automatic relation between "knowing", "change of attitude", and "doing." The factors that have a bearing on the step from knowledge to practice are several, among them resistance to change in general as well as family and community settings which are resistant to changes in behavior.

Gender too has an impact on the way in which girls and boys take on their responsibilities concerning health care and the related actions intended to prevent diseases and promote health. It was found that girls have

a stronger tendency to apply the knowledge acquired concerning health care and the promotion of constructive behavior in their homes, schools and communities.

Actors in the education and health sectors have a positive assessment of the School Health Component, and highlight how it is part of and supports compliance with public policies the common aim of which is to improve health among the population through educational activities at the grassroots level that in turn have an impact on knowledge, attitudes and practices leading to proper health care and the prevention of diseases.

The findings of the case studies evidenced by the project have generated lessons that have programmatic implications; The following recommendations are derived from them: 1. Define strategies that intentionally and transversally favor, the simultaneous promotion of knowledge, change of attitudes and practices related to health; 2. Strengthen the articulations with social and institutional actors to favor the participation of children in community actions for the promotion of health.

The findings of the case study made it possible to identify a set of recommendations for the programmatic strengthening of the school health project and, more broadly, for the performance of SC within the framework of its health and education programs, including the following: 1. To encourage the educational action of the project in the field of health care and disease prevention is developed within the framework of the subjects established in the educational curriculum; 2. Strengthen the baseline survey process to gather information about attitudes; 3. Strengthen the links with health brigades and other actors to encourage the participation of children in community actions for the promotion of health and the prevention of diseases.

I. Introduction

Children have a fundamental human right to health, which in the full sense of the word, carries implicit the enjoyment of conditions that allow them to grow and develop in a context of physical, emotional and social well-being (WHO, 1946, p. 1) and the guarantee of free and quality care leading to the prevention of disease, the promotion of health and treatment and rehabilitation in case of illness (Child Rights Committee, 2013, par. 3).

The exercise of this right is circumscribed by a set of social determinants, among them socioeconomic and environmental conditions, sanitation policies, life styles, universal and free access to health services, as well as the knowledge, practices and attitudes families and their children have toward health care. It can be said that health care is a responsibility borne by girls and boys, depending of course on the level to which they have developed their faculties.

As an outcome of poverty reduction policies, increases in social investments, the restoration of free access to health services, the expansion of health infrastructure and the implementation of a preventive approach which concentrates on families and communities, the Nicaraguan state and society have made progress as regards improvement of the main child morbidity and mortality indicators.

That said, there persist adverse social conditions that pose a serious challenge to the efforts being made to ensure people are healthy. Among these are poverty, which is both cause and effect of the violation of human rights, unsatisfied basic needs in homes, environmental degradation, insufficient health infrastructure and staff in rural areas which are difficult to access, as well as individual and social resistance to abandoning behaviors, habits and life-styles that affect people's health.

In order to deal with these challenges, inclusive policies are being implemented which call upon all social sectors and actors to join endeavors to ensure that children can exercise their right to health. This is where the education sector has the potential to assist in such a way that children come to strengthen their knowledge and competencies to take care of their health and that of their families and communities. An education for life is one that educates children on how to lead healthy lives.

Save the Children (SC) has joined these efforts and through its health program has seconded the government's efforts to prevent the spread of diseases and provide timely care in case of illness, while promoting healthy family behaviors and practices that favor child health. For SC in Nicaragua, it is the first experience of intentional school health work. Before, we only worked in the schools promoting access, educational quality and as crosscutting issue participation and child protection.

For linking health promotion to the children's right to an education and participation in all spheres of life, SC in 2016 joined the implementation of the School Health Component. Its activities take place at primary schools located in areas that are difficult to reach and have only limited access to health facilities. The Component is intended to assist children as they increase their knowledge of the main problems pertaining to health and nutrition that affect their school, homes and communities, adopt health care practices and position themselves as active health promoters in their immediate setting.

With the aim of assessing the impact exerted by the School Health Component, SC carried out a case study in order to establish what the children have learned, which health practices they are implementing at home, in their schools and communities, as well as the health promotion actions they are undertaking.

This document describes the findings of the case study undertaken during the months from May to July 2017 at the Luz de Bocay and José Adán Vásquez schools, located in the municipalities of El Cuá and San José de Bocay, respectively.

Specifically, the study answers the following research questions:

1. How do children promote knowledge of health in the family and in their immediate community?
2. What reactions have been received or observed from the members of your family?
3. What disease prevention measures are girls and boys taking for themselves, their families and their communities?
4. What are the changes that girls and boys have recognized in their prevention practices as a result of their participation in the School Health project?
5. What are the differences in the implementation of health knowledge among girls and boys from the two selected schools? What facilitators or obstacles do they point to?

This document contains the findings of the case study that was conducted in the months of May-July 2017 in the Luz de Bocay schools in the municipality of San José de Bocay and José Adán Vásquez in the municipality of El Cuá and San José de Bocay , in which the school health component has been implemented since the beginning of 2015 and 2017, respectively. Both schools are located in rural areas, characterized by limited population access to health care units and the prevalence of vector-borne and waterborne diseases.

The report contains six chapters. The first of these is the present introduction, which offers a general overview of the case study, while the second refers to its objectives and the methodology employed.

The third chapter depicts the local setting, social conditions which affect health and the action strategy carried out by the School Health Component at the schools selected for the case study.

The fourth chapter contains the findings as regards the knowledge displayed by the girls and boys concerning health care and how they practice it in their schools, homes and communities, as well as the individual and collective actions they undertake to promote health.

The fifth chapter describes the impact of the School Health Component on the lives of the children, their families, schools and communities.

Some final evaluations resulting from the case study are described in chapter six.

II Objective and methodology

The objective of the case study was to determine how girls and boys ranging from 8 to 12 years of age at the Luz de Bocay and José Adán Vásquez schools "*apply their knowledge in order to prevent the occurrence and spread of diseases and take measures to improve their health as well as that of their families and communities.*"

Considering the foregoing, the methodology used was by its very nature qualitative and descriptive, including prospective and cross-cutting analytical elements.

In order to ensure the reliability of the findings and their adequate triangulation, the following social research techniques were applied:

- Research among secondary sources, essentially an analysis of SC documentation and official reports on child health indicators.
- Interviews with the following actors: 1. SC staff charged with implementing the School Health Component; 2. The principals at the Luz de Bocay and José Adán Vásquez schools; 3. Community leaders and health brigade members; 4. Health staff at the Local Comprehensive Health Care System (SILAIS) in El Cuá, which accompanies the schools attended to by SC.
- Focus groups made up of teachers from the Luz de Bocay and José Adán Vásquez schools.
- Entertaining and participatory workshops with children who participate in SC health promotion activities in the framework of the School Health Component.
- Collection of life stories from girls and boys whose participation in the health promotion activities undertaken at the schools is distinguished.
- Non-participant observation of school activities (recess and lunch), for the purpose of noting the degree of use made by children of the knowledge acquired regarding health care and nutrition.

The table below shows which techniques where used and where:

Table 1.- Technique used during case study research	Luz de Bocay School	José A. Vásquez School	Save the Children
Interview with SC staff	-	-	2
Interview with school principals	1	1	-
Interview with community leaders	1	2	-
Interview with health care staff	1	-	-
In-depth interview with children and family members	2	2	-
Entertaining / participatory workshop with children	10	9	-
Focus group with teachers	6	5	-
Total	21	18	2

Source: Attendance kept at activities

The report was written based on the information gathered from primary and secondary sources and using the inter-method triangulation approach.

III Context

Nicaragua's face is that of girls, boys and adolescents, who make up more than one-third of the population (INIDE, 2012, p. 56).

Health conditions are determined by their geographic location in the country, the climate, social situation, and the capacities of the state, families and communities to ensure compliance with their rights.

The prevailing tropical climate may influence the frequency with which infectious diseases such as dengue and leishmaniasis occur. Indeed, these tend to peak during the rainy season, which runs from May to October.

Chart 1.- Map of Nicaragua and Case Study Area

Source: the consultant

The conditions of general (24.9%) and extreme (6.9%) poverty in which the population lives (BCN, 2017, n.p.) are also factors in the children's health profile. Unsatisfied basic needs caused by overcrowding, inadequate housing and a lack of basic services are associated with a higher incidence of diseases.

Being impoverished children growing up in rural areas are shared traits among the girls and boys at the schools visited for this case study. The probability they will fall ill is higher and the probability they will receive timely and comprehensive health care is lower.

The population in the municipalities in El Cuá and San José de Bocay, in northern Nicaragua, live preponderantly in the countryside (85% and 84% respectively), and the poverty of its inhabitants, the disperse population and climate conditions, marked as they are by frequent rainfall during most of the year, only serve to exacerbate the difficulties in gaining access to health units.

The health infrastructure is being expanded in both municipalities, but remains insufficient to attend to a population dispersed over a large geographic area in which it is difficult to move around due to poor road conditions leading to rural communities and constraints as regards public transportation.

The municipality of El Cuá has one primary hospital, 10 health posts and 46 community homes of health (health center equipped with basic supplies located in communities that are led by leaders who assume the role of midwives or brigadistas) to attend to a population of 59,307; San José de Bocay has one primary hospital, 1 health center, 8 health posts and 123 community homes to attend to a population of 63,922. In general, people living in these municipalities need to travel a longer average distance to reach health units, above all when they require specialized care.

According to data published by MINSA (2016, n.p.), the main reasons for which people visit health facilities or are hospitalized more frequently are pneumonia, possible dengue fever, diarrhea and infectious gastroenteritis. The most frequent epidemic diseases are dengue and leishmaniasis.

These diseases have multifactorial causes, among them, individual characteristics, social and environmental conditions, inadequate health practices and limited information for the prevention of diseases and their symptoms, which makes early and timely detection and management difficult.

These factors explain that in communities with limited access to drinking water and sanitation and where the practice of handwashing is inadequate and incipient, they register a higher prevalence of diarrheal diseases, or that leishmaniasis is more frequent in communities where little is done to eliminate the nurseries of the mosquitoes that transmit it.

Although statistical data are not available, the stories of teachers consulted allow us to establish a positive association between the effects of illnesses and the absence of girls and boys from school, which, in turn, affects school desertion and repetition.

The communities at which the schools selected for the study are located share these characteristics, made worse by the severity of the prevailing poverty.

Luz de Bocay is made up of 81 families (390 inhabitants), almost all of whom have had basic public services (electricity and drinking water) installed in the past two or so years. Adults are involved mainly in agricultural activities, generally as unskilled seasonal workers.

The eponymous school has recently been refurbished by the government and the infrastructure is in excellent conditions (perimeter fence, sanitary facilities, sidewalks).



Escuela Luz de Bocay

The Francisco Estrada community in El Cuá is made up of 155 families who also have basic public services (electricity and drinking water), although the latter is intermittent. The houses are characterized by being constructed with materials of inadequate walls and floors and according to the story of community leaders, they face overcrowded conditions.

The economically active population works in agricultural activities as unskilled, seasonal labor, although some are small-scale farmers. Most of the homes have latrines, but conditions are inadequate, causing some to overflow during the rainy season. This in turn creates mosquito breeding grounds and forces many to defecate in the open.

The José Adán Vásquez School has 185 students during its morning shift. School facilities are precarious, as the girls and boys attend classes in a long wood shed with a dirt floor. There is not always access to drinking water, which affects the consistent practice of hygienic habits.

José Adán Vásquez School

According to the diagnostic exercise carried out by students and community members, the most common health problems that affect children living in both communities are diarreah, fever, grippe, dengue and in the Francisco Estrada community, leishmaniasis.

The causes of these diseases are related to the social and climate conditions in the communities and the behavior of its inhabitants:

> *In the community there are families who don't have drinking water and get it from nearby springs. Usually they drink it without chlorination. So this is why people get sick. Because of the humid climate, conditions that favor mosquito breeding grounds and thus the spread of other diseases that affect us, such as dengue and leishmaniasis*. Marlon Joya, Francisco Estrada community leader

> *We are affected mainly by diarreah, fever and leishmaniasis. This is because people don't keep their homes clean, don't get rid of stagnant water, which is where mosquitos breed.* Aura Lidia Hernández, health brigade member in the Francisco Estrada community

> *In our community there were many cases of diarreah, and this has to do with lack of hygiene among children who don't wash their hands before eating or after using the latrines. Also, not all families keep their homes clean, or wash their hands before cooking, or they leave food uncovered.* Ramón Aristides Rivera, Luz de Bocay community leader

The situation and conditions described in the foregoing are the perfect setting for the spread of diarreah and vector-transmitted diseases. The illness among the children also has an effect on school attendance and ultimately academic performance.

> *When children fall ill, they stop coming to class or we can see they are unwell right here at the school and have to send them home.* Principal of the Luz de Bocay School

At the José Adán Vásquez School it was found that children who acquire leishmaniasis tend to be absent for long periods of time because of both the disease itself and the secondary effects of the treatment.

> *These were the conditions that motivated SC to work on the health component and to include it at the Luz de Bocay and José Adán Vásquez Schools since the first quarter of 2016 and May 2017, respectively. The objective is that "girls and boys learn about health care, put what they learn into*

practice and share the knowledge acquired in their homes, schools and communities." Ninette López, School Health Project Coordinator

The rights to education and health are interrelated. When health is promoted at school, it leads to changes in the children's behavior, as they end up sharing what they learn and promoting good health practices in their homes and communities. This component strengthens the Ministry of Education's "Nice, Clean, Safe Schools" strategy. Our role is to assist teachers to acquire knowledge and have the resources needed to promote health at their schools." Dixmer Rivera, SC health coordinator

It is in this social context that the School Health Component is takes place, as part of the nationwide campaign titled Live Clean, Live Healthy, Live Nicely, Live Well, which has for its purpose to *"change the culture in everyday life*" through "*simple, ordinary, day-to-day activities*" which ensure that "*homes and communities, public and communal spaces, public and service institutions are clean, healthy and pleasant.*" (GRUN, 2013, n.p.). This campaign promotes healthy living habits, personal hygiene, the cleaning of homes, communities, public spaces and love of nature. It privileges individual and collective health care and disease prevention.

As regards school settings, the campaign's approach can be described by the MINED's "Nice, Clean, Safe Schools" strategy, which calls upon the entire school community to carry out specific, daily activities that ensure "the school looks nice, very clean and neat." In this regard, it propitiates that schools contribute to the well-being of its students, in particular their health, and this by preventing the spread of disease.

As concerns both contents and purpose, the activities of the SC School Health Component coincide with the objectives of the National Campaign and the Ministry of Education (MINED) strategy, thus easing its acceptance among actors in education, as they consider the Component an opportunity to strengthen their activities regarding the promotion of habits and lifestyles which make for healthy girls and boys.

The School Health Component strategy is to train a group of students and teachers on health care and the prevention of diseases that affect children. Once trained, these replicate what they have learned with a peer group, who in turn share the knowledge acquired with other members in the education community. As Ninette López sums up: "Our aim is that the knowledge acquired leads to changes in behavior."

We want the information on health care to reach the families and communities through the students. We use a trickle-down strategy. Yorleni Ramos, nurse at the SILAIS in El Cuá

The School Health Component intervention logic implies developing a social-educational process in which children are able to identify those diseases that impact them personally, their families and communities, determine what causes these diseases and prepare a Plan of Action to promote changes in behavior that prevent their occurrence. It also strengthens their ability to communicate, express themselves, propose solutions and participate in decision-making on matters related to health and nutrition.

The actions proposed by the children are specific and feasible, among them going to the preschools and early grades and teach hand-washing, give talks to the students on health care and disease prevention, place garbage bags at schools, carry out school cleaning days and so on. In general these are activities undertaken at the school, although there have been some in the community sphere as well, such as visits to encourage

families to eliminate mosquito breeding grounds and participate in community clean-up days. In support of the plan being proposed, the children select "monitors" from among themselves, whose responsibility it is to "*encourage the others*" to participate in the activities scheduled in the Plan of Action.

The School Health Component also seeks to establish synergies with the Community Case Management (CCM) strategy implemented by SC, the purpose of which is to extend health care services to children less than five years of age who live in communities that are far away from any health units. Here the aim is to ensure care and treatment of the main diseases associated with infant mortality through a network of volunteers known as health brigade members who live in the communities they serve.

> *We as health brigade members counsel families and schools in order to promote actions that prevent diseases.* Aura Lidia Hernández, CCM health brigade member in the Francisco Estrada community

The goal is to bring brigade members and children together. In this context, SC has encouraged the health brigades who live in the communities to link the schools served by the school health project, in order to support the teachers in the training processes for girls and boys on topics related to the prevention of diseases and health and hygiene practices.

In this dynamic, the brigadistas share their knowledge with the children and accompany them to carry out specific activities for the prevention of diseases (elimination of mosquito breeding sites, cleaning of schools and community spaces), while girls and boys, They feel supported by the promoters, who are leaders in their communities, who accompany them in some actions that are carried out in the community for the prevention of diseases..

> *This is a two-way street. On the one hand, the children help the brigade members in their health promotion work, while these accompany the girls and boys by sharing their knowledge of health care and accompanying the activities they carry out.* Dixmer Rivera, SC health coordinator

Over the long term the idea is that the children develop the same social commitment shown by brigade members when it comes to the health of people living in their communities.

IV Findings

There follows a description of the findings made during the case study regarding the knowledge children have of health care, their practices at home, school and in the community, the health promotion actions they undertake and the factors influencing these.

4.1 Knowledge

The educational actions undertaken in the health component have played a role in expanding the children's knowledge with reference to health care and, more specifically, how to prevent the occurrence of the diseases that occur most often in the communities they live in.

The health-related knowledge the children currently have cannot be attributed in its entirety to SC, since they are exposed to several sources of information (classroom contents, talks given by health staff school during visits). That said, it was established that beyond a doubt the educational activities promoted by SC have made a contribution to expanding and deepening their knowledge.

The added value of the school health component is its methodology based on a human rights approach, which encourages children to play an active role in the construction of their learning, favoring a better assimilation of knowledge about diseases and practices that they must assume to prevent them, while at the same time encouraging them to empower themselves of their right to health and internalize their responsibilities in their care. It also motivates their participation in health promotion actions carried out in their homes, schools and communities.

Unlike the traditional methods focused on the teacher and limited to the transmission of knowledge, the methodology with a focus on rights contributes to girls and boys having significant learning and position themselves as key actors in the promotion of health in their schools, families and communities.

It was established that the knowledge acquired by the girls and boys is related (in order of importance) to personal hygiene, the prevention of diseases that impact their communities (diarreah, vector-borne) and the relation between the environment and health. The table below describes the knowledge children at both schools declared they acquired or strengthened:

Table 2. - Knowledge Regarding Health Care (Girls, Boys, Adolescents)

	Luz de Bocay School	José Adán Vásquez School
Personal hygiene	– Brush our teeth to avoid diseases. – Wash our hands each time we use the latrine and before and after eating, to avoid diarreah and vomiting. – It is important to wash ourselves every day so as to be well and not get sick.	– We must wash our hands because we have bacteria and can get sick if we eat with dirty hands. – Watch our personal hygiene, shower daily, brush our teeth. – We learned the importance of hygienic habits, so as to be healthy.

Eating habits	– Eat healthy food, avoid junk food[1] and soft drinks. – Fruit must be washed before eating, even when picked directly from a tree.	– If we eat too much junk food, we can get sick.
Disease prevention	– If the water is not potable, we must boil it before drinking, or chlorinate it. – The water barrel must be kept clean so we can drink the water. The same goes for the glasses or cups from which we drink. – It is good to have a bag or barrel in which to put the garbage, otherwise it just ends up being thrown away.	– It is important to avoid mosquito breeding grounds, because if they bite us we can get leishmaniasis. – Leptospirosis is transmitted by rats, because some people leave their food uncovered and rats urinate on it. – Our yards at home must always be clean. We have to burn or bury any garbage, to avoid their filling up with trash.
Care of the environment	– We must take care of the environment, because our health depends on it. –	

At both schools it was noted that the children had acquired and /or strengthened their learning on health care and disease prevention, although there were differences. Only at the Luz de Bocay School was the importance of caring for the environment mentioned, which indicates the children there understand that their health also depends upon conditions in their natural setting. This supports developing actions that link the two (health and the environment).

Teachers consulted pointed out that the most important things their students learned relate to personal hygiene and keeping the school grounds and their homes clean. They said this is evidenced by the appearance of the girls and boys, who come to school looking neat and clean, and wash their hands before taking the school lunch.

These findings coincide with the results of the intermediate line of the SC health program, which showed that the children had increased their knowledge on essential aspects of health care and disease prevention. The mid-term measurement identified the percentage of children that know the meaning of safe drinking water increased from 64% in 2015 to 85.83% in 2017. This information is especially germane when it comes to preventing diarrheal diseases, considering that unsafe water is the main cause for these types of diseases, which are among those that most affect children in the communities of Luz de Bocay and José Adán Vásquez.

Knowledge of the risks of consuming non-potable water has contributed to children and inform and motivate their mothers and fathers to chlorinate, boil or filter the water they eat at home, including, what they give their sisters and brothers More smalls. The stories of change expressed by girls and boys indicate that the messages they transmit to their mothers, fathers and other relatives are favoring changes in attitudes and practices related to the prevention of water diseases.

[1] Products with no nutritional value that is sold under various commercial names in Nicaragua .

It was also determined that there is now more knowledge on the importance of hand-washing as a means of preventing the spread of diseases. In 2015, no child knew why this practice is important, while in 2017 that percentage had risen to 53.44%. Knowing about the importance of hand-washing encourages its practice and the prevention of diarrheal diseases caused by lack of personal hygiene.

Chart 2.- Do you know what safe drinking water is?

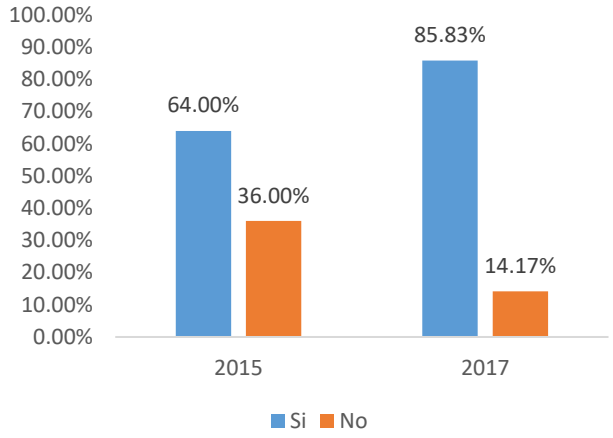
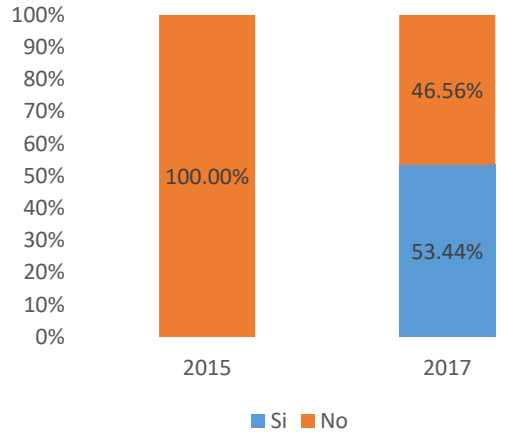


Chart 3.- Do you know why it is important to wash your hands?



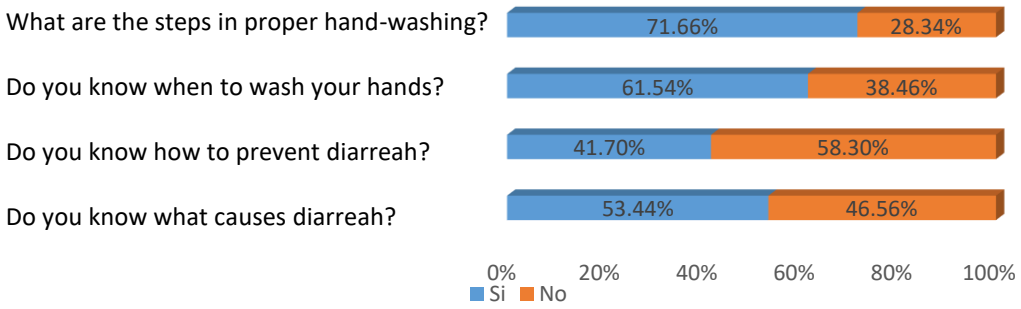
Source: Baseline and intermediate line of the SC School Health Component

Girls, boys, teachers and school authorities all point out that knowledge has increased with respect to the causes of certain diseases which affect the children and ways to prevent them, among which hand-washing stands out.

This assessment coincides with the intermediate line findings, which showed that 53.44% of the girls and boys know what causes diarrhea and 41.70% know how to prevent it from occurring. Knowledge of the causes of diarrhea (drinking contaminated water, poor hygiene habits, among others) contributes to preventing its spread, because the children can convey health care messages to the adults in their lives.

In addition, 61.54% of the children knew when they are to wash their hands and 71.66% knew the proper steps to take. This knowledge bolsters the effectiveness of hand-washing as a strategy for disease prevention, as it is not enough to simply "wash your hands" – it must be done at the right moment and in a proper fashion.

Chart 4.- Knowledge about health among children



Source: Intermediate line of the SC health component

There is no baseline information to which the knowledge measured at this point in the implementation of the School Health Care Component can be compared. It is positive that, on average, more than half of the children queried know what causes diarreah and how to prevent it, as well as the moment when they must wash their hands and the proper way to do it.

At the focus group meetings, all girls and boys said they knew something about aspects related to health care. This noteworthy difference can be explained by the simple selection mechanism, which at the intermediate line measurement was random and during the focus group meeting, intentional.

There is also a slight increase in the knowledge of the symptoms of the diseases that most affect children in the Luz de Bocay and José Adán Vásquez schools: pneumonia (+ 5% of knowledge) and diarrhea (+ 2% of knowledge).

Chart 5.- What are signs of danger in a child with pneumonia?

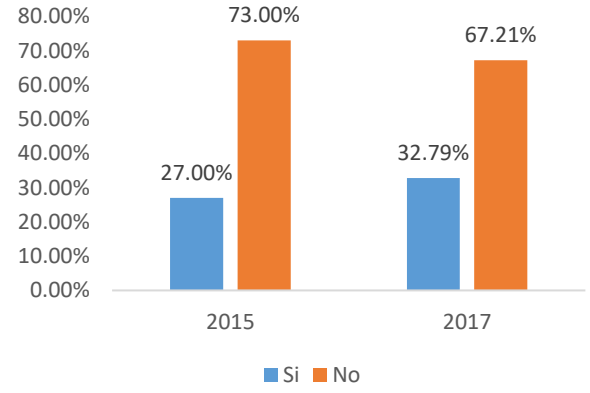
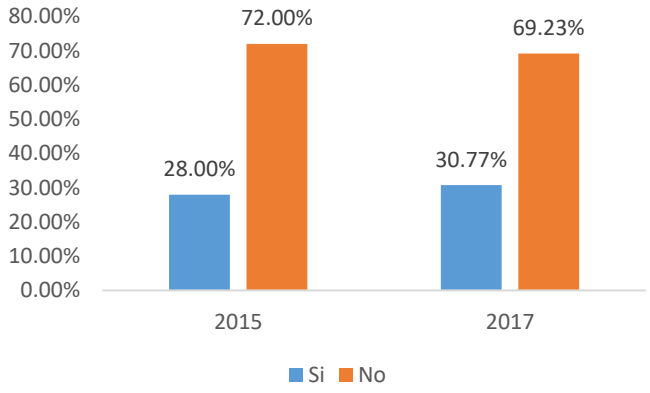


Chart 6.- What are signs of dehydration in a child with a diarreah?



Source: Baseline and intermediate line of the SC School Health Component

The ability to identify the symptoms of the diseases which most frequently affect children in their communities is very relevant because students play a fundamental role in health care both at home and in the communities, where they warn their mothers, fathers or community members in a timely manner when they recognize a symptom, so adults seek medical attention.

This “early warning on disease symptoms” is particularly pertinent in the communities of Luz de Bocay and José Adán Vásquez, which face serious obstacles as concerns access to health units unidades de salud. It should also be considered that girls often take on care tasks for their younger sisters an. También debe considerarse que las niñas asumen con frecuencia tareas de cuidado de sus hermanas y hermanos más pequeños, lo que les ofrece la oportunidad alertar tempranamente a sus madres y padres de síntomas de enfermades

4.2 Applying the knowledge acquired (health practices)

Knowledge acquisition predisposes children to adopt adequate health care attitudes and practices. However, there is nothing automatic between “knowing something” and “doing what one knows.” Hence there is a gap between the degree of knowledge and its practical application.

The transit from knowledge to practice is influenced by multiple factors, among them resistance to change, living conditions in the children's homes and the support they may get from their families and communities.

There follows a description of the knowledge the children stated they are applying at school, in their homes and communities.

4.2.1 At home

Home is the first space in which girls and boys socialize. This is where they learn to care for their health, usually by following the example set by adults.

The children's health care practices mentioned are related to personal hygiene habits, food and the prevention of diseases.

Table 3.- Home Health Care Practices Reported by the Children

	Luz de Bocay School	José Adán Vásquez School
Personal hygiene	– Now I brush my teeth three times a day. – I've improved my personal hygiene: I wash every day and am clean. – Every time I defecate I use the latrine. I don't do it in the open any more. – Before I used to only wet my hands, but now I do it the way the teacher told us, using soap and water.	– I wash my hands when I'm about to eat, so that I stay healthy. – When I pick fruit from the trees, I wash them before eating.
Eating habits	– I'm eating less junk food, because it was explained that it's bad for us. It causes stomachaches and anemia.	– I used to eat a lot of junk food chatarra (it is denominated like this to products with high content of fats, condiments, salt or sugar) and fell ill with anemia. Now I understand I should eat healthy food. it is denominated like this to products with high content of fats, condiments, salt or sugar
Disease prevention	– I clean the yard at home so animals that can bite and harm us don't come, and also to avoid mosquitos. – I keep the kitchen clean, the dishes washed.	– Before I didn't gather the trash and my house was dirty. I got sick with leptospirosis and didn't come to school for a week, during which time I was in hospital. Since then I keep my house clean so I won't fall ill again. – We are recycling bottles in order to avoid their filling up with water and become mosquito breeding grounds. – At my house we chlorinate the water.

These practices are common to girls and boys from both schools, except in relation to water chlorination, which is only promoted in girls and boys of the José Adán Vásquez school, since in the communities where they live water service is intermittent and does not receive the proper chlorination, for this reason the use of chlorine is water permanently promoted to disinfect the water and make it potable. The lack of drinking

at the José Adán Vásquez school makes it difficult for girls and boys to internalize the handwashing habit, a practice that was most frequently identified in girls and boys of the Luz de Bocay School, where there is permanent water in school and homes.

Drawing by a girl at the Luz de Bocay School, showing how at home she washes her hands and gathers the trash.

Drawing by a boy at the José Adán Vásquez School, depicting daily showers, hand-washing and waste disposal.

These practices were confirmed by community leaders and teachers:

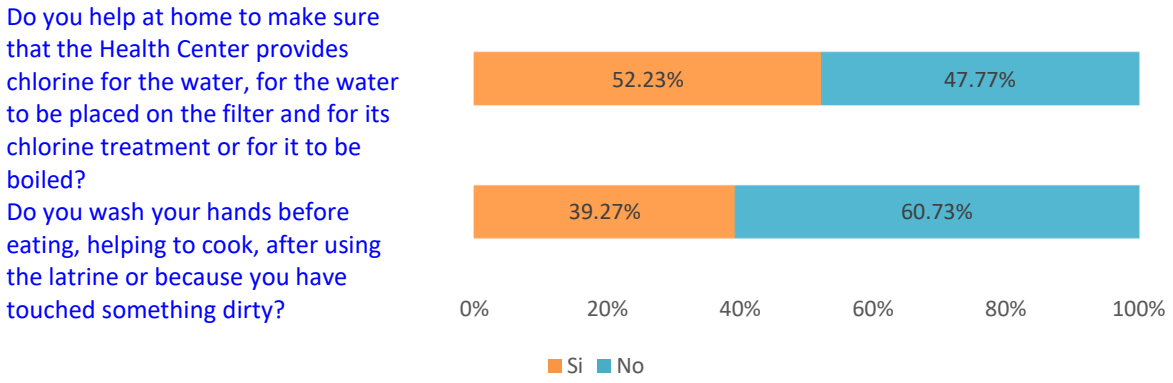
> *In some of the children we can see the change. They practice hygiene, keep the premises of their homes clean, don't throw waste on the ground and wash their hands when they use sanitary facilities.* Ramón Rivera, Luz de Bocay community leader

> *During the visits we make to their homes we've noticed that they keep them clean. There is now more personal hygiene: daily showers, teeth-brushing, hand-washing. Now they come to school nice and clean, not with dirty clothes or without washing, like before.* Teacher, Luz de Bocay School

> *The children look better now, feel better about themselves and are more confident when relating to other girls and boys*. Teacher, José Adán Vásquez School

These findings are in keeping with the intermediate line, which indicates that 39.27% and 52.23% of the children wash their hands at appropriate times and make sure they drink clean water, respectively. There are no statistical data that allow for a quantitative comparison of these practices, since the baseline evaluates knowledge only. However, it is considered a positive development that more than a third of the children have incorporated hand-washing to their daily routines and support their parents in actions that ensure everyone at home drinks safe water.

Chart 7.- Practices carried out by children at home



Source: Intermediate line of the SC School Health Component

These statements carry implicit the assumption that these girls and boys are taking on health care responsibilities (hand-washing) and playing an active role in their families as concerns the chlorination, filtering and boiling of the water they drink. The latter are practices in homes that do not have access to running water.

4.2.2 At school

After the home, school is the place with the most influence on the lives of children. It is a space in which they acquire and strengthen knowledge and develop health care habits.

Further, the school can potentially remedy any weaknesses existing at home. Thus the children have the opportunity to acquire more knowledge than that of their family members and to absorb positive health care practices which are not part of the family setting.

There follows a description of practices the girls and boys reported they carry out at school:

Table 4.- School Health Care Practices Reported by the Children

	Luz de Bocay School	José Adán Vásquez School
Personal hygiene	– I wash my hands before eating our school lunch. – After using the latrine, I wash my hands well.	– When I use the latrine I wash my hands to avoid getting sick from eating with dirty hands.
Eating habits	– I now eat less junk food. I haven't stopped entirely, but it's less frequent.	– I don't eat any more junk food, they cause sickness.

Disease prevention	– We gather the litter so the school is clean and recipients such as bottles and tires don't fill up with water. – We keep the latrines clean because we know that dirt brings diseases. – We keep the area around the school clean. – We collect the litter and separate it. One part gets burned and the other we bury to make fertilizer.	– We recycle the trash, especially the bottles which we used to throw away, but now use in our school vegetable garden. – We clean up the school and classrooms every day, and the schoolyard every two weeks or once a month.

These practices assist in preventing diseases and improving health among students, while showing care for nature as well.

Girls and boys who participate in the school health component, in addition to setting an example to their peers with their individual practices, participate in collective health promotion actions, which are organized together with their teachers. These activities consist mainly of cleaning days (garbage collection, elimination of mosquito breeding sites) and in them, the children participating in the project, direct their peers, explaining the importance of preventing diseases, sensitizing them about their responsibilities in health care and motivating them to assume habits and practices that favor the prevention of diseases.

A boy at the Luz de Bocay School drew himself washing his hands after using the latrine.

A drawing by a girl at the José Adán Vásquez School shows the practice of hand-washing.

Teachers and community leaders highlight that the children are using their knowledge on health care and disease prevention at the schools:

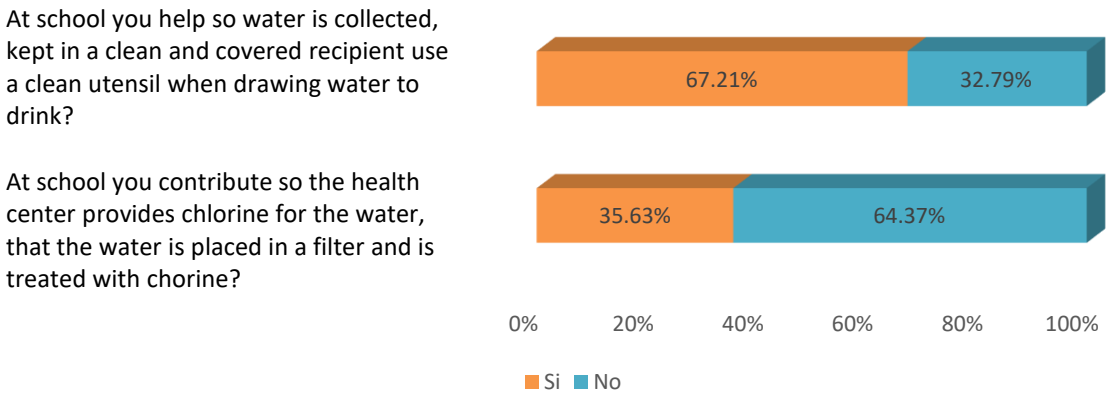
> *Since the Project began we've noticed the children wash their hands before eating their school lunches. Those in preschool leave their classrooms in line and go wash their hands every day.* Teacher, Luz de Bocay School

> *The children have improved their eating habits. Now they are eating less junk food, which used to be their breakfast.* Teacher, Luz de Bocay School

> *The consumption of junk food has diminished, and the same goes for soft drinks. Now the children buy healthy foods, such as ice cream, cookies or fruit.* Teacher, José Adán Vásquez School

We've made progress on garbage collection, and the children are getting used to proper waste disposal. Things are also better in terms of healthy eating habits and eliminating junk food. Principal, José Adán Vásquez School

Chart 8.- Practices carried out by children at school



Source: Intermediate line of the SC School Health Component

These reports match the findings in the intermediate line study, which found that 35.63% of the girls and boys help to ensure the water at their schools is chlorinated and filtered. The same source identified that 67.21% of the children help in the collection and safe storage of drinking water. These practices are part of preventing diarrheal and other diseases caused by the intake of unsafe water.

There are no baseline data to which these results might be compared. These practices are in any case more frequent among girls and boys at the José Adán Vásquez School, where the water supply is intermittent and (according to the population) not sufficiently chlorinated.

4.2.3 In the community

Collective health care practices taking place in community spaces were less frequent. *It was identified that girls and boys of the Luz de Bocay school have carried out some actions to promote health in their community, particularly cleaning days, elimination of mosquito breeding sites and home visit to share information with residents for the prevention of diseases transmitted by vectors.*

These activities are carried out within the framework of community health days organized by the MINSA in coordination with the MINED, and in them, children are accompanied by their teachers and health brigades who support them and ensure their safety while performing tasks. of cleaning or visit house to house.

We've gone out into the community to talk to families about the importance of disease prevention, and especially the elimination of mosquito breeding grounds that cause dengue. Monitor, Luz de Bocay SchoolAt the José Adán Vásquez school, it was not identified that girls and boys perform . health promotion actions at the community level, this is largely due to the fact that the project is beginning its implementation phase, so that they have not been developed. actions aimed at promoting the participation of girls and boys in the promotion of health in the community space.

At the José Adán Vásquez school, it was not identified that girls and boys perform health promotion actions at the community level, this is largely due to the fact that the project is beginning its implementation phase, so that they have not been developed. actions aimed at promoting the participation of children in the promotion of health in the community space

4.3 Socializing knowledge and promoting healthy habits

The School Health Component aims to generate changes in behavior among the girls and boys and that they position themselves as actors in promotion at their schools, homes and communities. This means they must share what they learn with their peers at school, at home from their elders and in the community from some of its members.

There follows a description of the health promotion activities undertaken by the children at home, in school and in their communities.

Table 5.- What children share at home, at school and in their communities

	Luz de Bocay School	José Adán Vásquez School
At home	– I talk to my brothers and sisters about the importance of hand-washing. – I tell my mother we should keep the food covered, in order to avoid diseases due to flies or leptospirosis, which is transmitted by rats. – I insist on our collecting and throwing out the garbage.	– We motivate our family members to be clean and neat. – I tell my mother that the house must be kept clean and the litter which is lying around gathered and burned. – I share with my family that the house must be kept well swept and we put the rubbish in its place.
At school	– We go to the early grades and share with the little ones what we know about how to avoid dengue by eliminating mosquito breeding grounds.	– During the break we give talks to other children, so they learn what we have learned.

At the Luz de Bocay School the following practices were identified:

- We shared with our friends in the community how to take care of their health. Some believe us, others don't, they say we're liars, because they buy soft drinks and haven't gotten sick.
- We've gone door-to-door to talk to people about how to avoid dengue, especially by eliminating mosquito breeding grounds.
- We've given talks to parents in the community where we explain to them that they need to keep their yards clean and not have anything lying around that could contain water, because that is where mosquitoes breed.

At the José Adán Vásquez School no health promotion activities carried out by students were identified.

The dissemination activities carried out by students were confirmed by community leaders:

The children tell their families what they learn, but it is up to us adults to follow what they say or not. They talk to us about healthy eating habits, about avoiding junk food. Marlon Joya, Francisco Estrada community leader

They are raising awareness at home about keeping the house clean and the need to go to the health units to get vaccines. Principal, José Adán Vásquez School

The children share what they learn with their peers, with the other students. They say 'Do as I do, wash your hands, don't just toss all your trash on the ground.' So they practice what they learn and tell others to do the same. Ramón Rivera, Luz de Bocay School community leader

I've noticed that the children are sharing what they learn with their peers, both in their own and other grades. Teacher, Luz de Bocay School

The decision to promote health at schools, at home and in the communities is related to the reaction of the people to whom the girls and boys speak, as well as their resilience in situations in which their message is not well received.

We tell them not to throw the litter on the ground in the schoolyard. Some react well, others are rude: 'You pick it up, then,' they say to us. Adolescent, Luz de Bocay School

In Luz de Bocay the health promotion actions carried out by girls and boys at their schools, homes and community evidence they are exercising their right to participate in those things that are of interest to them and affect their lives.

The organization of girls and boys in their schools and communities to carry out health promotion actions includes activities planned in the educational curriculum or in the execution of national or municipal health days. Generally, teachers expose girls and boys the proposal to carry out an activity to promote health and it is they who decide what and how to do it; with the direction of the student monitors, define roles that each one will assume and finally, carry out the planned activities, with the accompaniment of their teachers and health brigadistas

4.4 Why don't all children practice what they know?

Notwithstanding the progress made in health care knowledge and practices, all actors queried agreed that only some of the girls and boys put what they learn into practice. This situation is understandable, as there is no automatic connection between knowledge and practice.

When children were asked why they don't do what they have learned is correct, the answers were as follows:

1. They distrust the information they receive from their peers. This can be linked to adultism, which leads children to believe that only what adults tell them is valid or true. They therefore underestimate the information they get from people their own age.

    There are those who pay no attention to us. Maybe it's because they don't believe what we tell them about the diseases. Boy at the José Adán Vásquez School

2. Frequently children react with indifference to messages about health care and disease prevention, either because they fail to see its relevance, underestimate the risks involved in harmful practices or think they personally won't fall ill.

> *There are many who, although they know it's bad for them to continue eating junk food, don't believe us when we tell them they could get sick.* Adolescent, José Adán Vásquez School

> *They tell us not to eat junk food, but we do anyway, although we know it's harmful.* Adolescent, Luz de Bocay School

> *We don't get it until we get sick. We eat junk food, but since nothing happens, we don't believe it's bad for our health.* Adolescent woman

For their part, community leaders, teachers and school principals added the following causes:

1. Lack of support and even resistance to changes in behavior among family members.

> *At home neither mother nor father ask that their children follow what their children have learned about health care, so the children don't really pay attention*. Ramón Rivera, community leader

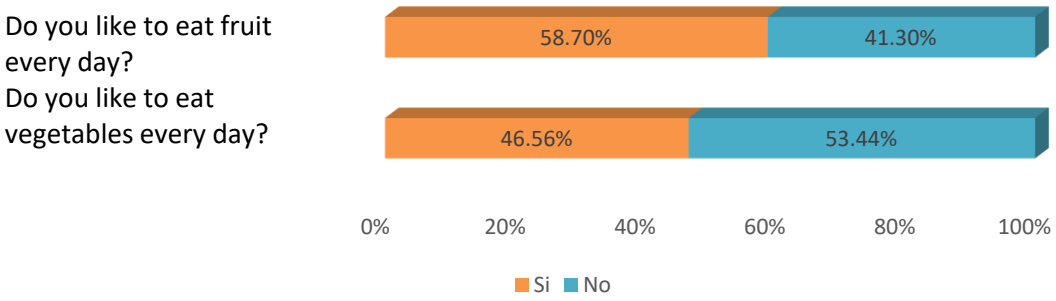
> *Here at the school we stop the children from buying junk food, but when they get home they do because we're not getting support from parents.* Teacher, Luz de Bocay School

2. The context in the community is resistant to behavioral change, in particular if it touches upon their children's eating habits. Although MINED is promoting that the stands at the schools offer healthy foods to the children, there are stores nearby that sell products which are demonstrably bad for their health (salty snacks, candy).

   Many of the products sold in the stores (junk food, soft drinks) have negative effects on the children's health, as they are associated with obesity and childhood diabetes, metabolic disorders, allergies and other health conditions.

> *The problem with the consumption of junk food is that it's available at practically all the stores near the school, so there aren't really any options for buying healthy food.* Nurse, El Cuá SILAIS

Chart 9. - Vegetable and fruit consumption habits



Source: SC School Health Component baseline

It was found that it is very difficult for girls and boys to change their eating habits, specifically as regards getting away from junk food. This matches the findings shown in the intermediate line (53.44% don't like to eat vegetables every day; 41.30% don't like to eat fruit as part of their daily diet).

It is not possible to statistically compare changes in the consumption of fruit and vegetables because the baseline has no information on the subject. Still, it is considered positive that almost half the children said that fruit and vegetables are part of their daily diet.

Predictably enough, consumption of fruit and vegetables depend upon availability and the eating habits at home, which is where children acquire the habit and taste for having fruit and vegetables as part of their daily food intake. If mothers don't include these foods in their children's diet, they will resist eating them.

4.5 Gender analysis

Gender is a social construct that defines the masculine and feminine and assigns men and women dichotomous roles which have historically deposited responsibility for health care on women.

Women therefore participate more in health care, and thus all actors queried agreed that although girls and boys acquire the same knowledge, it is the former who tend to put it into practice and promote changes in behavior in their homes, schools and communities.

Girls and adolescent women perform "domestic chores" with their mothers, a circumstance that favors their sharing what they learn at school about health care and disease prevention.

> *It is women who cook, take care of the home and look after anyone who falls ill. These roles make it so that girls are more receptive.* Ninette López, School Health Project Coordinator

> *Girls tend to transmit what they learn at school because at home too they practice what they learn. Over time, they take over domestic tasks, wash clothes, clean the house, help in the kitchen. And so they are open to sharing what they know with their mothers, sisters and brothers and other children in the community.* Teacher, Luz de Bocay School

> *Women are friendlier and we listen to each other.* Adolescent woman, Luz de Bocay School

These roles also exert an influence on male participation at the schools, where it is the girls who stand out when it comes to health care and promotion. However, it was acknowledged that boys participate in activities normally carried out by men, such as hoeing the fields.

> *Boys and adolescent men tend to work more in tasks such as cleaning the weeds that grow on school grounds or working on the school kitchen garden. They get less involved in cleaning up classrooms or washing latrines, as they think of these as tasks women should be doing.* Teacher, José Adán Vásquez School

> *The boys don't wash latrines, but we women do*. Girl, José Adán Vásquez School

> *Women participate more in activities related to cleaning, they sweep and clean up, the boys don't like that, they only move the chairs.* Girl, José Adán Vásquez School

These findings indicate that the performance of the project should be strengthened in order to overcome gender roles and stereotypes that exclusively assign to women some areas related to health care and disease prevention.

Another factor that is the nature of the socialization processes and game dynamics between girls and boys. While the former tend to engage more in dialogue, the latter are more interested in games that limit the possibility of dialogue. In addition, the construction of masculinity penalizes that men practice any activity considered to be the province of women.

> *We women are in charge of hygiene, not the men. During break we get together and talk, but the guys are only interested in playing.* Girl, José Adán Vásquez School

Gender influences how girls and boys take on their responsibilities as concerns health care and the activities they perform at home, at school and in the communities in order to prevent the spread of diseases and to promote health.

V. Impacts

The health component has had multiple positive impacts on the lives of girls and boys, and these are related to cognitive processes (knowledge of health care) and behavior (practices in the home, school and community spheres).

There follows a description of the main impacts identified:

Knowledge about health care and disease prevention

Girls and boys have strengthened their knowledge on the diseases that affect them, having developed the capacity to identify and act to prevent them both individual and collectively. In this regard, the evaluation exercise undertaken by SC reached the conclusion that "*girls and boys understand what the main diseases are that affect their schools, homes and communities, such as respiratory and vector-borne diseases*" (SC, 2016, p. 15). Knowledge plays a fundamental role in the individual and collective transformation of attitudes and practices related to health care: knowledge is the prelude to action.

The methodology used by the project favors that children take ownership of knowledge about health care, which ensures the sustainability of the project's action in the field of knowledge, which favors the change of attitudes and practices in relation to health care.

Girls and boys embrace health care practices

The information on health care has allowed girls and boys incorporate a set of practices to their daily lives that lead to an adequate state of health, while preventing the spread of diseases.

The findings indicate that at both schools which were studied the changes in the children's behavior goes beyond the School Health Component, meaning that these practices have been incorporated to their daily lives and that they will persist once the SC project comes to an end.

> *There are changes in attitude that favor health care. Before the children threw their trash anywhere and didn't care. But now they've changed their way of thinking and are aware that their health depends upon their actions.* Teacher, Luz de Bocay School

It was determined that at the Luz de Bocay School the changes in behavior are more evident and generalized. This can be explained by the longer period during which SC has been present (over one year) compared to the school in El Cuá (two months).

Disease reduction

Health brigade members, community leaders and teachers agree that the SC actions are contributing to reduce the occurrence of diseases that affect school-age children (in particular diarrhea, stomach infections, dengue and leishmaniasis).

Diseases have also been reduced among children less than five years of age. This can be linked to the health promotion efforts of girls and boys in their homes. When they convey information on disease prevention to their parents, the latter tend to take better care of their smaller children, thus avoiding that they fall ill.

> *The Project is contributing to reduce diseases. As a health brigade member I can say that putting hygienic habits into practice has helped to prevent some of the most common diseases, such as diarreah, which is caused by not washing one's hands or drinking contaminated water.* Ramón Rivera, community leader

Reduction of absenteeism caused by illness

As now fewer children are falling ill, both attendance and retention is up at the schools. The occurrence of diseases is clearly associated with absenteeism, and this in turn affects the student's motivation and performance. The teachers queried sum it up as follows: "*Helping to prevent the occurrence of diseases makes it more likely the children will stay in school*."

However, in the Francisco Estrada community, where leishmaniasis is frequent, the children who are infected tend to be absent from school for long periods:

> *They lose up to three weeks of class due to the symptoms of the disease and the secondary effects of treatment.* Teacher, José Adán Vásquez School

Girls and boys promote health at home, at school and in their communities

This experience has positioned children as important actors who assist in promoting health at home, at school and in their communities. Thus they learn to participate in matters that affect them directly.

Families, teachers and members of the community acknowledge the children's contribution to health care. This serves as a platform from which they can participate in other spaces and entities when there is something that interests them.

An additional outcome is that the children have enhanced their communications skills, which in turn enhances their participation on other matters at home, at school and in the communities.

Teacher's knowledge strengthened on the approach to health care at schools

The health component is part of the educational strategies intended to promote health. In this regard, it can be said that the teacher's knowledge and methodological capacities to deal with health-related contents and disease prevention has been strengthened and has motivated them to encourage the children's participation at their schools, homes and communities.

> *We use the information we were given at the training sessions in the "Knowing my World" and Natural Sciences classes, because in those we talk about the importance of health care and disease prevention. We also use this knowledge during our guided hours, which are a space in which teachers and students can exchange knowledge and talk about a variety of issues, including health.* Teacher, José Adán Vásquez School

Acknowledging the importance and pertinence of the School Health Component

Actors in the education and health sectors agree that this component is pertinent to the children's lives and the setting of the communities in which health and education policies are put into practice.

The first thing mentioned by the inhabitants of the communities of Luz de Bocay and José Adán Vásquez is that they face geographical constraints that make it difficult to accede to health units. This situation lends particular importance to the activities undertaken with the aim of preventing diseases and the early identification of their symptoms, so there is time to get to the health units, difficulties notwithstanding.

They further pointed out that the health-related initiatives being promoted by the schools reflect the priorities established by MINED and MINSA, which stress changes in individual and collective behavior as these relate to health care and community organization to prevent the outbreak and spread of diseases.

The “Nice, clean, safe schools” strategy encourages students to absorb knowledge and health care practices that help them to position themselves as agents of change in health promotion both at home and in their communities.

VI. Final Evaluation

The girls and boys who participated directly in the SC School Health Component have acquired new knowledge on how to care for their health and that of their families and persons living in their communities. They are starting to effect changes in their own behavior, while sharing their knowledge with others, thus motivating families, peers and community members to also make changes in their individual and collective health care habits.

The children at both schools have learned relevant facts on how to care for their health, that of their families and communities. There does not appear to be a significant difference between what the children learned at each of the schools, although at the José Adán Vásquez School the Health Component only went into effect two months ago.

The health care practices the children have incorporated to their daily lives find expression mainly at home and at school (personal hygiene habits and activities intended to prevent the occurrence of diseases).

In general, the changes in behavior start from what is taught at school (i.e., hand-washing, proper waste disposal) and from there are taken on back into the home, where the children propitiate their being adopted by other family members and even persons living in the communities.

Those who have access to drinking water at home tend to wash their hands more frequently, as it is easier for them to put into practice a set of hygienic habits that necessarily involve access to water sources.

While the Luz de Bocay School has been refurbished recently and now has a permanent supply of water, the José Adán Vásquez School still needs significant improvements of its infrastructure and its access to drinking water is intermittent. This means that hand-washing among children occurs more frequently at Luz de Bocay, as their peers at the José Adán Vásquez School can only wash their hand when water is available, as the supply is intermittent.

Collective cleaning of the schools is frequent at both schools, but circumstances differ. The recent and noteworthy improvements to the infrastructure and access to water at the Luz de Bocay School encourages personal hygiene and collective cleaning of school grounds. It is easier for these students to keep their classrooms neat, deposit the garbage in the recipients which are there for the purpose and to keep green areas clean. Further, the grounds are flat, unlike the topography at the José Adán Vásquez School, which is built on a slope.

Substantial differences were noted in the health promotion activities taking place in the communities, as only the children attending the Luz de Bocay School reported having carried out activities in the community. This difference can be explained by the time the Health Component has been active at each of the schools (over a year at Luz de Bocay, only two months at José Adán Vásquez). Thus the former school has had more time in which to consolidate the children's knowledge and strengthen their participation beyond the school setting.

The educational activities of the School Health Component have expanded and strengthened the children's knowledge. This in turn leads to changes in behavior. Still, it was noted that not all children put what they learn into practice, and there is considerable resistance in specific areas, such as eating habits.

This situation points to the need of influencing the setting the children live in, especially girl/boy – mother /father relations, as families undoubtedly play a fundamental role in the process of putting in practice the knowledge acquired by children regarding health care.

The results indicate that girls and adolescents are the most receptive when it comes to incorporating health care practices to their daily lives. This is associated to gender as a social construct, which assigns household care and cooking chores to women.

With respect to the socialization of knowledge, it was found that the girls and boys tend to share their knowledge with their families and to a lesser degree, with members of their communities.

Differences were observed as concerns the practice of sharing knowledge with the communities, as this was reported only by children at the Luz de Bocay School, where the time during which the Health Component has been active has allowed for strengthening the student's communication skills. At the José Adán Vásquez School this process has yet to get underway.

These activities in the community are in any case still incipient, and usually take place in the context of MINED institutional activities (i.e. community clean-up and disease prevention days). Put otherwise, these are actions which are not directly related to the SC School Health Component, although the events take place using its presence as a source of support.

Girls tend to socialize the knowledge acquired with peers at school and their families at home. Traditional gender roles and stereotypes encourage girls to accompany their mothers from a very early age in the carrying out of "domestic chores," a circumstance that favors their sharing what they learn at school about health care and disease prevention.

At school the girls also stand out due to their higher participation in activities related to keeping school grounds clean. This emphasizes the need to continue strengthening the gender perspective, for the purpose of encouraging boys and adolescent men to become more actively involved in health promotion.

As for the institutional sphere, school principals and teachers consider that the School Health Component reflects the MINED's "Nice, Clean Safe Schools" strategy. This means it is evaluated in a positive light, its activities can be included in the school's activities, and use can be made of social-educational processes in which teachers and students participate in other aspects of school life.

The activities undertaken by the School Health Component is part of and contributes to educational and health policy, which have for their common objectives to contribute to improving the population's health through community-based educational activities that exert an influence on the knowledge, attitudes and practices with reference to disease prevention and health care.

For their part, actors in the health system consider that SC actions strengthens MINSA in its efforts to work through the schools to promote health care and prevent the spread of diseases.

Finally, the strengthening of communication and collaboration links between health staff, school principals and teachers, and CCM brigade members was facilitated, thus ensuring there are synergies between the schools, health care units and volunteers in the communities, as they strive to prevent diseases and improve health among girls and boys, their families and communities.

VII. Life Stories

A Life Story and Changes at the Luz de Bocay School

The Luz de Bocay community stretches along the banks of a full and flowing river which reflects the surrounding mountains and runs like brown thread through a mantle of green. The eponymous school is the largest and cleanest building in a community to which electricity and drinking water are a novelty, as these only arrived in the past two years.

Eira Blandón, 12, attended preschool and primary school in Luz de Bocay, where she learned reading, arithmetic, history and how to take care of her health and prevent diseases: "*I've learned a lot, like how to wash my hands, that I need to eat healthy foods, that there are foods which are unhealthy and should be avoided, like junk food,* maruchan *(a kind of instant soup) and soft drinks."*

Thanks to the School Health Component which Save the Children and MINED are carrying out at her school, she has learned that many diseases are preventable and that "*children get sick because of the poor hygiene in their homes.*" This has motivated her to incorporate a set of health care practices to her life, including "*hand-washing, personal hygiene and eating nutritious food.*"

Eira shares what she has learned with other girls and boys: "*We give talks to students in first and second grades, go to the classrooms and talk to them about health care. At home I tell my mother she has to wash her hands when she's getting ready to cook. In the community we form health brigades and go door-to-door asking mothers if they've taken their children to be vaccinated. We also tell them to get rid of mosquito breeding grounds and keep their yards clean."*

Elizabeth Blandón, 35, smiles when she talks about what her daughter has learned about health care: "*They've taught her about hand-washing, keeping the food covered, cleaning the latrines*." She remembers an occasion when Eira saw her throw a plastic bag to the ground and said to her: "*Mom, you're a teacher, you've got to set an example and put the trash in its proper place.*" (Laughs). "*She also talks to her brothers and sisters about health care, and tells her peers at school they should eat healthy food."*

The best way advice Eira gives is by example: "*She keeps the house clean and when her classmates come they all mention how clean and neat she keeps the house. They see the pots and pans we use for cooking, they're clean and shiny and she explains that she washes them every day with an aluminum scouring pad and soap.*"

Eira, who has been following the words her mother draws in the air with her expressive hands and gestures values her experience as a female health promoter: *"I feel good, because what I'm doing helps the children to avoid falling ill. I like it when they take my advice."*

A Life Story and Changes at the José Adán Vázquez School

From the José Adán Vásquez School there is a beautiful view of the Francisco Estrada community: the river slithers by in the distance, giving life to the immobile, silent trees that cover the mountains with an intense green color. Alexania Montenegro, 13, enjoys this view almost every day. And here, at this small school, she is preparing for life. Life and health are closely intertwined and she knows all about it: "*The teachers gave me advice on how to avoid getting sick: wash my hands before eating and after using the latrine, gathering the trash, keeping the school clean and putting cleanliness into practice in the community.*"

Health needs to be taken care of, it is fragile and in this community, many girls and boys have lacked it at some point in their lives, meaning they've been ill. "*We're very much affected by leishmaniasis, because our homes aren't very clean. Lots of people leave bottles lying around, the water gathers and mosquitoes breed in these places. People almost never clean the community.*"

But what they've learned has led to action: "*I gather bottles and old cans I find in the community, and I've given training on the prevention of leishmaniasis and other diseases.*" Alexania mentions that she shares everything she learns with other children: "*Some heed my advice, others don't, but that's how it is, and we're headed in the right direction.*"

More than one girl or boy in the community owes their being healthy to Alexania, such as a neighbor to whom her mother used to give unwashed fruit. One day Alexania told the mother: "It would be better if you washed the tomato before giving it to your daughter, because fruit have microbes and she can get sick. The mother agreed and now she washes the fruit."

Martiza Tórrez, 41, is Alexania's mother. She speaks slowly and little, but is very clear about what she has to say: "*I feel happy about what my daughter does, because instead of it being us, the older people, who are teaching the youngsters, it is they, in this case my own daughter, who does it and sets an example… I'm proud that my girl is working with this Project, because it's going to be really helpful to us and the families living in the communities.*"

And you, Alexania, how do you feel? She answers laconically: "*Happy and proud of what I'm doing.*"

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