

## **The challenge of evaluating a project to support education for orphans and vulnerable children. The case of the AVSI OVC Program in the Great Lakes Region – Africa.**

**Lucia Castelli**

Associazione Volontari per Il Servizio Internazionale

**Francesca Oliva**

Associazione Volontari per Il Servizio Internazionale

**Giancarlo Rovati**

Catholic University of Milano – Italy

**Jackie Aldrette**

Associazione Volontari per Il Servizio Internazionale

*This paper presents a baseline evaluation conducted in mid-2006 on a program serving 12,000 orphans and vulnerable children in Rwanda, Kenya and Uganda and managed by AVSI. Following a quick review of the program under investigation, this paper addresses survey design and implementation, focusing discussion on the operational problems encountered and overcome. Secondly, the paper presents how data analysis was streamlined and strengthened through the development of six innovative indexes which can be utilized for time-bound data resulting from the longitudinal survey design. Beyond their practical utility, these indexes can be considered an interesting product of the research and are therefore placed for review and consideration of the scientific community at large.*

**Keywords:** Education, Challenge, Evaluation, Africa

### OVERVIEW

As the HIV/AIDS epidemic continues to exact a heavy toll on families and communities throughout Africa, the wave of children left orphaned and made vulnerable by these circumstances continues to surge. Programs dealing with orphans and vulnerable children (OVC) are caught in the urgent need to scale up the services and care provided while also keeping a priority focus on the children being served and their needs, rights and desires. Program monitoring and evaluation in the context of services for OVC raise particular challenges. The multi-dimensional aspects of child-well being, countless factors of influence, the importance of context, and the long-term nature of change all contribute to a very complex task of understanding how, why and to what extent a given program is improving the lives of children and communities.

Holistic programs need holistic tools. Evaluation exercises in cases of urgent action such as HIV/AIDS-related care and treatment must fulfil many missions simultaneously: improve programming, guide decisions, provide data to demonstrate impact which both educates and motivates program staff and volunteers, and communicate effectiveness of program to external stakeholders.

Most non-profit organizations engaged in caring for OVC face very real constraints of time, resources and logistical complications which may include multiple countries, thousands of beneficiaries, rural settings, and continued movement of children.

This paper presents a baseline evaluation conducted in mid-2006 on a program serving 12,000 orphans and vulnerable children in Rwanda, Kenya and Uganda and managed by AVSI (Associazione Volontari per Il Servizio Internazionale). The purpose of the baseline study was to

*provide a description of the program beneficiaries through the definition of a set of indicators both consistent with available data and accepted guidelines and rooted in the program objectives and to supply the OVC program team with appropriate tools for data collection to be used throughout the life of the project for monitoring and evaluation purposes.*

## PROGRAM OBJECTIVES and METHOD

The Italian non-governmental, non-profit organization AVSI Foundation is the lead implementing partner of a cooperative agreement with the United States Agency for International Development (USAID). This agreement supports a four year program to increase the care for orphans and vulnerable children (OVC) in the Great Lakes region of Eastern Africa and is funded through the U.S. President's Emergency Plan for AIDS Relief (PEPFAR). Building upon past experiences and replicating well-defined systems, this program has allowed AVSI to scale up the provision of quality services to 12,000 orphans, vulnerable children and their families and communities through an operative network of 120 local partners. The program is fundamentally oriented at the well-being of the child with a consistent focus on education. Yet, the program works with and seeks to strengthen the institutions of the family of the community as the circles of care that surround children.

The program combines direct and indirect forms of assistance for OVC in order to respond to the seven program objectives.

- Objective 1: to strengthen the coping capacities of OVC and their families (natural or foster) and communities affected by HIV/AIDS;
- Objective 2: to support education and skills training;
- Objective 3: to improve health status and care;
- Objective 4: to address psychosocial needs;
- Objective 5: to support community-based relief;
- Objective 6: to enhance the capacity of AVSI's current and prospective local partners;
- Objective 7: to integrate and harmonize the OVC focused intervention with other HIV/AIDS and poverty reduction initiatives on the ground.

The direct assistance is provided to children under 18 years who are identified and selected by qualified partner organizations based on locally defined vulnerability criteria. Direct assistance can include a combination of school fees and other materials for school attendance, after-school programs, vocational training, health care, recreational opportunities and emotional support, depending on the needs of the child and the resources of his/her family.

Indirect assistance consists of interventions that improve the environment in which the OVC program participants live and study. Indirect support can include activities to promote quality in education, income generating activities for families and organizations, community projects, sensitization and other types of family support. In addition, training and consultations are provided for individual partner organizations to address institutional and operational weaknesses and to improve capacity, efficiency and quality.<sup>1</sup>

Over 100 community based organizations were selected as local partners according to criteria of local connectedness, vision and mission, and capacity. The local partners are the primary implementers of the direct assistance interventions and most of the indirect support. Local partners work closely with AVSI to prepare regular work plans, ensure quality data collection and reporting, and determine and oversee budgeting and spending.

## PURPOSE and DESIGN

Widespread consensus has emerged around the necessity of integrated monitoring and evaluation (M&E) systems in relief and development programs. These systems can have many purposes and

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<sup>1</sup> A complementary part of the program's evaluation system incorporates an assessment of the capacity of the local partner organizations and seeks to demonstrate impact in this domain over the life of the project.

uses, both internal and external to the implementing organization. Within the AVSI OVC program, the M&E system design responds to the needs of program management and transfer of capacity to local partners and to the interest in demonstrating impact and understanding the linkages between factors.

Although the program's primary donor, USAID through the PEPFAR funding stream, did not require an explicit evaluation component of the program, AVSI felt strongly that some attempt to go beyond monitoring of program activity and output level indicators would have significant benefits for the program, its stakeholders and for the organization. AVSI decided to invest in an evaluation exercise that would:

- 1) Develop tools and methodologies to collect baseline data at the domain of the child beneficiary;
- 2) Train survey implementers to successfully utilize data collection tools;
- 3) Conduct a baseline assessment of a sample of the program participants; and
- 4) Provide recommendations on potential indicators to demonstrate impact.

This ambitious scope of work was to be carried out in an environment with very clear constraints: limited budget (\$35,000 for the preparatory work and implementation of baseline survey by consultants), limited time of local staff, field sites in three-countries including many rural areas, movement of survey population, and political and security concerns in the region.

The goal of the baseline study was to understand the program population and environment and to provide means of tracking areas that affect children's well-being and may be influenced by the program interventions.

AVSI held a competitive process to identify a team of consultants to conduct the baseline study. The Fondazione per la Sussidiarietà, an Italian firm specializing in analysis for the non-profit sector, submitted a technically sound and cost-effective proposal which satisfied AVSI's criteria. The team leadership was particularly strong and has institutional links to a Sociology Department of a top Italian University.

### Survey Design

A non-experimental evaluation design was utilized. Consideration of many factors led to this decision, including the resources available and the difficulty of locating an adequate comparison group.

The consultants selected a mixed method approach. Quantitative data was collected through the implementation of a semi-structured survey and results were triangulated through qualitative techniques including in-depth interviews and feedback meetings.

The survey features a longitudinal structure, allowing for follow-up of the sample twice during the life of the program and upon completion. Sampling was done using probabilistic, stratified and proportional methods, thus allowing for the results to be deemed applicable to the entire universe under study. The universe was the 3,685 children ages 6-16 enrolled in the AVSI OVC program (2004-2009) at the beginning of this project, out of a total of 4,458 children enrolled ages 2-18. The decision to limit the sample size was made because of the programmatic interest in tracking school attendance and performance (eliminating children under six years old) and the need to include participants who would be in the program for at least two years (removing youth who would exit the program because of age).

Random sampling techniques produced a sample of 1,200 children proportional to the participants in each country and according to gender and age (*Tab. 1*).<sup>2</sup> A group of reserves was created using the same random sampling techniques to compensate for problems locating or interviewing individual children in the sample.

The database managed by AVSI was the primary tool utilized in creating the sample.

An interviewer identifier was included on each of the questionnaires to register the number of cases assigned to each interviewer and the effective number of questionnaires administered as a quality control mechanism.

Table 1: Population of children and children sampled

	6 - 12 years (1994-2000)		13 - 16 years (1990-1993)		Total	
	Male	Female	Male	Female	N.	%
<b>Population of children</b>						
Kenya	396	353	247	171	1167	31,7
Rwanda	123	153	161	157	594	16,1
Uganda	463	524	467	470	1924	52,2
Total	982	1030	875	798	3685	100,0
<b>Children sampled</b>						
Kenya	117	122	89	52	380	31,7
Rwanda	39	47	55	49	190	15,9
Uganda	165	195	130	137	627	52,4
Total	321	364	274	238	1197	100,0

The consultants were keenly aware that the quality of the outcome of the baseline study depends on meeting four pre-requisites:

- a. The correspondence between the chosen indicators and the aspects investigated (validity)
- b. The ability of the interviewees to fully understand the questions asked (comprehensibility)
- c. The sincerity and precision of the answers provided by the interviewees (accountability)
- d. The possibility to extend the information provided by the sample to the entire population (statistical representativeness)

These concerns guided the formulation of the questionnaire, the guidelines and training on survey implementation and the decision of whom to interview.

At the conclusion of the data analysis, the team was confident that these requisite conditions were met.

### Questionnaire Development

Two preliminary phases preceded Data Collection. The team of consultants first conducted research and preparation off and on-site. In-depth interviews and focus group discussions with project staff from AVSI and local partners helped the consultants understand the informational needs and the reality of survey implementation. A key task was building consensus on definitions that would be applicable across the three countries. The survey tools were developed with wide reaching participation of many stakeholders and were field tested.

During the initial phase of exploration and program review, the research team developed an analytical framework which guided the creation of the survey tool (*Tab. 2*).

<sup>2</sup> With 95% of probability the marginal error in the general sample is equal to 2,3%, it is 4,1% for Kenya, 5,9% for Rwanda, and 3,1% for Uganda.

Table 2: Initial frame of analysis: thematic areas, indicators, variables

Area	Indicator	Observable variables/operative definitions
Education	Attendance	- Frequency of attendance - Delay in the education path - Drop-out
	Performance	- Ranking - Child behaviour
Health	Physical aspect	- Height - for - Weight - Malformations
	Disease	- General health - Chronic diseases
	Malnutrition	- Kind of food eaten - n. of meals per day
	Language capacity	- Language property - Stuttering
Family	Livelihood capacity building	- Employment situation of the family members - Employment stability - Family Income - Participation in assistance and support project - House conditions
	Protection	- Frequency of the contact with family members - Level of intimacy - Closeness

The trans-national character of the survey was an important consideration requiring translation into English and French, as well as local languages for communication with children and guardians in different regions. The high number of languages - Kinyarwanda, Kiswahili, Luganda, Acholi, Runyankole and others - didn't allow for the translation of the questionnaire into every spoken language. AVSI decided to translate the questionnaire into the working language in the respective countries (English for Kenya and Uganda and French in Rwanda). The interviewers received training in either English or French and were guided to interpret the questions in the local language while in the field as needed. These unavoidable linguistic mediations have made the data collection process less standardized across the three countries and have likely increased accidental errors, but these adjustments have also allowed for the completion of the planned interviews and for reaching appreciable results. The survey was pre-tested with the actual interviewers and some controls were put into place to verify the validity of data collected through the survey.

Development of each indicator and the corresponding questions was a delicate process. In some cases, indicator development required careful incorporation of concepts drawn from everyday life into a common definition. For example, when constructing an indicator for the quality of a guardian-child relationship or for the presence of good hygiene practices, it was necessary to consider observable indicators that would be widely accepted in the different environments.<sup>3</sup>

Other indicators were derived from existing studies and had operational and quantitative definitions already attached. In these cases, the challenge of empirical measurement was more acute. An indicator related to malnutrition, for example, would normally rely upon specific measurements of body weight and height. In this case, the limitations of measurement tools and skills forced alternative concepts of nutrition relying upon the observation of trained social

<sup>3</sup> Specific mention is due to the urban/rural indicator which was introduced in the questionnaire in order to classify the children belonging to the two socio-economic and socio-cultural frameworks, under the hypothesis that different opportunities and life styles are available in the two areas. An area has been defined as urban if it contained at least three of the following structures: post office, health centre/hospital, police, district headquarter, or bank; all the other areas have been considered rural. The assumptions lying at the basis of the definition have been confirmed and it is therefore legitimate to consider this indicator as an instrument to be included in the box of methodological tools available to the social science researchers.

workers. In cases where subjective measures were used to assess a given indicator, rating and frequency scales were incorporated to transform qualitative data into quantitative measures.

This process of indicator formulation and adaptation was carried out through a highly participatory process with technical experts and staff with many years of field experience in the surveyed areas. A pre-test of the survey was a valuable procedure that allowed for further refinement. The result is a tool that is considered highly objective and reliable by the range of stakeholders consulted.

The semi-structured questionnaire is composed of four thematic sections: A. Identification; B. The Situation of the Child; and D. Needs Assessment. Across the four sections, the tool comprises 29 questions and 95 sub-questions for a total of 322 variables.

## IMPLEMENTATION

Following a two-month period of data collection, 1,197 out of the identified 1,200 children in the sample were located or substituted through strict random controls and provided satisfactory responses to the survey. The survey was given to parents or guardians rather than directly to the children. This decision was made because of the concern for the reliability of responses of children to a number of questions and because of the objective nature of the information being gathered.<sup>4</sup>

The feasibility of survey implementation depended in large part on AVSI's organizational capacity and its relationships with local partner organizations involved in the OVC program. Without strong relationships with local partners, the physical and social barriers would have considerably diminished the reliability and scope of this research and would have significantly increased costs.

The research team decided to select interviewers from among the social workers employed by AVSI and some university students who had internships with AVSI during that period in the three countries. Recognizing the potential limitation of involving staff in the implementation of an impact evaluation, the team and AVSI felt that the benefits of such a method would outweigh the relative risks. The benefits included: strongly held commitment to the program, positive rapport with guardians and beneficiaries, experience with the context including transportation and cultural elements, and logistical possibility of follow-up in case of data quality concerns.

The data collection was done by a team of thirteen trained interviewers (4 in Kenya, 2 in Rwanda and 7 in Uganda). A Survey Field Coordinator oversaw the administration of the survey and division of tasks. The most challenging element of survey implementation is precisely that of ensuring consistency and quality in data collection. The group of interviewers must have to capacity to:

- a. Convince an adequate number of persons to accept to be interviewed;
- b. Ask personal questions without limiting the freedom of the interviewee;
- c. Provide the necessary explanations without influencing answers;
- d. Register answers accurately without misrepresentation of respondents' opinion; and
- e. Guarantee the interviewees' privacy and anonymous use of the collected information.

Training was carried out by the research team during two field missions. AVSI oversaw the distribution and administration of the questionnaires in the three countries and their expedition to Italy for analysis.

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<sup>4</sup> An additional reason for the decision to interview guardians was of the complexity and scope of the information sought, which relates to school performance and family well-being. The research team agreed with AVSI that, while valuable in its own right, the opinion and perception of the child was not the main focus of this research.

An important factor which cannot be overlooked or underestimated is the reception of this evaluation activity by AVSI and local partner staff. Rather than being perceived as a burden imposed from the outside, the laborious task of the design, implementation and analysis of the baseline was received as a stimulating opportunity for learning and growth by most of the persons involved. In fact, AVSI conceived of this evaluation from the start as a mechanism for internal reflection and capacity building in addition to the more direct objective of demonstrating program impact. The quality of response and ownership has created a favorable ground for the implementation of future rounds of the survey.

### Data analysis

#### Development of a set of indexes

Cognizant of the many interrelated factors that influence the well-being of a child and his/her development and ultimately happiness, AVSI's OVC program assumes a holistic view of the participants. More specifically, the focus on ensuring educational opportunities and achievement among program participants also demands a wide-reaching purview since a host of factors (health, family characteristics, school system, safety and environmental factors) all impact access to, quality of and ultimately the learning achieved in formal schooling. Four domains were included in the questionnaire: psychological and physical health, education, family, and environment.

The large amount of qualitative information collected through the questionnaire was transformed into a rating system against which changes can be measured through the creation of six separate indexes. Each index is a synthesis of measurable information collected by separate questions and responding to the same indicator. All of the indexes, with one exception, correspond to areas of the child's life which the program aims to impact either directly or indirectly. The Orphanhood Index will not be discussed in this article because it reflects characteristics of the child which do not fall onto a continuum of change upon which the program could have an impact.

Table 3 summarizes the domains, indicators, and variables incorporated into the questionnaire and the corresponding indexes.

Indexes on the children's health (Disease Index, Nutritional Index), their psychosocial and economic background (Care Giving Index, Family Economic Wellbeing Index, Social Risk Index) and their school persistence and performance (School Performance Index) were developed so as to allow for the analysis of relationships among different aspects of the children's characteristics and background through variable cross - analysis techniques and cross country comparison. The data can be analyzed according to country, gender, age, or against a wide range of interesting variables.

#### Disease Index

The Disease Index has been built on the basis of frequency data of some of the most common diseases affecting the children of the three countries: diarrhoea, malaria, worms, typhoid, flu, cough, and an open category for "other" illnesses.<sup>5</sup> An increasing weight has been assigned to each illness according to the frequency of their occurrence with double weight assigned to the variables of malaria and typhoid because of their severity. The transformed variables were then summed up to obtain a frequency distribution. The distribution was divided into a scale of five

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<sup>5</sup> This information was collected by question 3.3 The answer choices included a list of the most common diseases and a corresponding frequency scale for each disease. Frequency of disease was considered an important determinant of severe and long-term conditions which have greater impact on the child's ability to grow and function normally.

Table 3: Indicators identified

Domain	Indicator	Variable	Index	
Psycho-Physical Health	Physical aspect	Ratio size/weight	<b>Disease Index</b>	
		Malformations		
	Disabilities			
	Personal Hygiene			
	Physical health	Diseases (HIV/AIDS, Diarrhoea, Malaria, Worms, Typhoid, Flue, Cough)		
	Nutrition	Number of meals per day Kind of food most frequently eaten		<b>Nutritional Index</b>
	Autonomy	Capacity of washing alone Capacity of eating alone Capacity of dressing alone		
Quality of the relation with the guardian	Quality of the relation with the guardian	The guardian listens to the child	<b>Care giving Index</b>	
		The guardian spends time with the child		
		The guardian takes care of the child when sick		
Quality of the relation with other adults in the family				
Quality of the relation with the peers				
Education	School attendance	Delay in the child educational path	<b>School Performance Index</b>	
		Regularity of the attendance		
School performance	School performance	Ratio age/education level	<b>School Performance Index</b>	
		Class ranking		
Family	Economic security	Participation in class activities	<b>Family Economic Wellbeing Index</b>	
		Behaviour		
		Number of family members having one or more sources of income		
Family Education level	Family Education level	Dependency ratio in the family	<b>Family Economic Wellbeing Index</b>	
		Level of cash income		
Environment	House	Family properties	<b>Social Risk Index</b>	
		The sustainability of the household's debt situation		
		Average family level of education		
Security of the Area	Security of the Area	Distance from water source	<b>Social Risk Index</b>	
		Distance from health unit		
		Presence of electricity		
		Presence of: dirtiness, noises, isolation, criminality		

values ranging from *very bad* (the child is affected often or very often by at least two diseases); *bad* (the child is affected often or very often by one disease); *fair* (the child is affected sometimes by at least three diseases); *good* (the child is affected sometimes by one or two diseases); and *very good* (the child is never or rarely affected by any disease).

The information provided by the Disease Index can be studied in conjunction with the data collected through other questions in the survey including, for example, HIV/AIDS status.

#### Nutrition Index

A Nutrition Index incorporates the data collected on the number of meals eaten per day and variety of food in a child's diet.<sup>6</sup> Two steps were taken in the creation of this index. First, a food variety index was built with increasing weight given to each type of food according to its frequency in the child's diet, with double importance given to the variable for meat and fish.<sup>7</sup> The results of the food variety index were then multiplied by the number of meals per day, and the results were then put into a frequency distribution. The Nutrition Index is a scale with three values inclusive of *bad*, *fair*, and *good*.

#### Care-Giving Index

A Care-Giving Index synthesizes three variables constructed to understand the quality of the relationship between the child and the parent, guardian or care-giver. The variables measure the frequency with which guardians listen to, spend time with and care for the child in illness.<sup>8</sup> A different weight was assigned to each variable according to the frequency indicator, and the transformed variables summed up. The resulting frequency distribution was used to produce a scale of five values ranging from *very bad*, *bad*, *fair*, *good* and *very good*.

#### School Performance Index

The School Performance Index incorporates three variables: participation in class activities, behaviour, and ranking in the class.<sup>9</sup> Two of the variables have been transformed to be comparable.

First, the school ranking data was collected in terms of quintiles—bottom 20%, 21-40%, 41-60%, 61-80%, and 81-100%—and redefined on a five value scale ranging from *very bad*, *bad*, *fair*, *good* and *very good*.<sup>10</sup> The class participation variable was collected on a three value scale: *bad*, *fair*, and *good*. These values were translated to a five value scale to be compatible. Lastly, the indicator for behaviour in school was already on a five value scale.

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<sup>6</sup> The data comes from the responses to two questions, 3.4.1 and 3.4.2. Question 3.4.2 includes a list of common foods consumed in the three countries: beans and cereal, meat/fish, vegetables, fruit.

<sup>7</sup> An increasing weight has been assigned to the variables beans and cereals, vegetables, fruits, and other, according to their frequency in the child's diet (Never = 1, Rarely = 10, Sometimes = 100, Often = 1000, Very often = 10000); and double importance has been given to meat/fish (Never = 2, Rarely = 20, Sometimes = 200, Often = 2000, Very often = 20000). The transformed variables have been summed up in an index ranking from very bad (there's no kind of foods that the child eats often or very often), bad (the child eats often or very often only one type of food), fair (the child eats often or very often two different types of food), good (the child eats often or very often three different types of food) and very good (the child eats often or very often at least four different types of food)

<sup>8</sup> These variables were measured in question 7.1 which included a list of frequencies for three statements.

<sup>9</sup> Corresponding questions are 11.2, 11.3, and 11.4. The information on these values was collected from the school report cards of the children.

<sup>10</sup> Class rank is an imperfect indicator of individual performance because of the number of variables which can impact the outcome. In data collection, the absolute value of individual rank was converted into a quintile scale, thus making a more generalized statement about an individual's performance relative to his/her school environment. No objective, comparable measure of academic performance exists across the three countries. The School Performance Index is useful for exploring correlations between school behavior and outcomes with other factors in general terms.

The three variables were summed up, resulting in a comprehensive frequency distribution from which a final five value scale of school performance ranging from *very bad*, *bad*, *fair*, *good* and *very good* was created.

#### Family Economic Well-Being Index

Three variables were incorporated into the Family Economic Well-Being Index: family properties, level of total cash income, and sustainability of household debt.<sup>11</sup> Reorganization of the data collected for each variable was carried out to create this synthetic index.

Considering family properties, the data was first consolidated into a weighted index which assigned values to each type of property ranging from livestock/other, to means of transportation, to large property such as a house or land. The resulting frequency distribution was divided into four values: *1 = Very Bad* = the family doesn't own any properties; *2 = Bad* = the family owns only small properties; *3 = Fair* = the family owns at least one house or a piece of land; *4 = Good* = the family owns both a house and a piece of land.

The data collected on family indebtedness was reclassified with numeric values for each possible response: *1 = High debt burden*; *2 = tolerable debt burden*; *3 = irrelevant debt burden*; and *4 = no debt*.

These two scales were then incorporated with the family income data which was collected according to a four-value scale. The question utilized income scales for each country that reflect socio-economic levels which would be easily understandable to the common person being interviewed.

The resulting Family Economic Well-Being Index consists of a four value scale ranging from *Very Bad*, *Bad*, *Fair* and *Good*.

#### Social Risk Index

In the interest of gauging the relative stress of a child's context on his/her life and educational achievement, the survey team chose to incorporate the data correspondent to one variable into an index of Social or Environmental Risk. Respondents were asked which of the following characteristics applies to the living environment of the child: dirtiness, noise, isolation or criminality. Each response was assigned a weight according to the gravity of the problem. Criminality was considered as the most dangerous factor, for example, not only because of the threat to children and family well-being, but also because of the potential as a source of bad influences on the young child or youth.

The frequency distribution was divided into three values: *low* = area characterized only by isolation or noise; *medium* = area characterized by dirtiness; and *high* = area characterized by criminality.

#### Conclusions and Discussion

The implementation of the baseline survey resulted in a large amount of information, with only a fraction of that utilized in the creation of the indexes outlined above; the survey has provided for very thorough analysis of the population of children enrolled in AVSI's OVC program and their environments across three countries. Because of the sampling methodology utilized, the conclusions drawn from the collected data can be generalized as descriptions of the entire universe of the children within AVSI's OVC program. The resulting data has numerous implications for program design and management in the remaining period of this program and

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<sup>11</sup> These variables were captured in questions 20, 21 and 23.

beyond. The large amount of work carried out by the consultants will allow the AVSI program staff to further refine the indicators used for program monitoring and impact evaluation.

### Results from the Data

**Health:** Analysis of the health situation and physical characteristics of the OVC reveals fair or good conditions for most of the children in each of the three countries. The Nutrition Index in Rwanda and Uganda is lower than that of Kenya (Fig. 1). Uganda demonstrates the worst health conditions for the highest number of children in particular because of the high incidence of diseases such as malaria and HIV/AIDS (Tab. 4). In Kenya, almost all the health variables exhibit better values on average than in the other countries. The HIV infection status of most children is not known (73% average), while a larger proportion of Ugandans know their status, and also have the highest rates of infection (6.9% Uganda, 3.2% Rwanda, 2.0% Kenya).

Figure 1: Nutritional Index per country (Percentages)

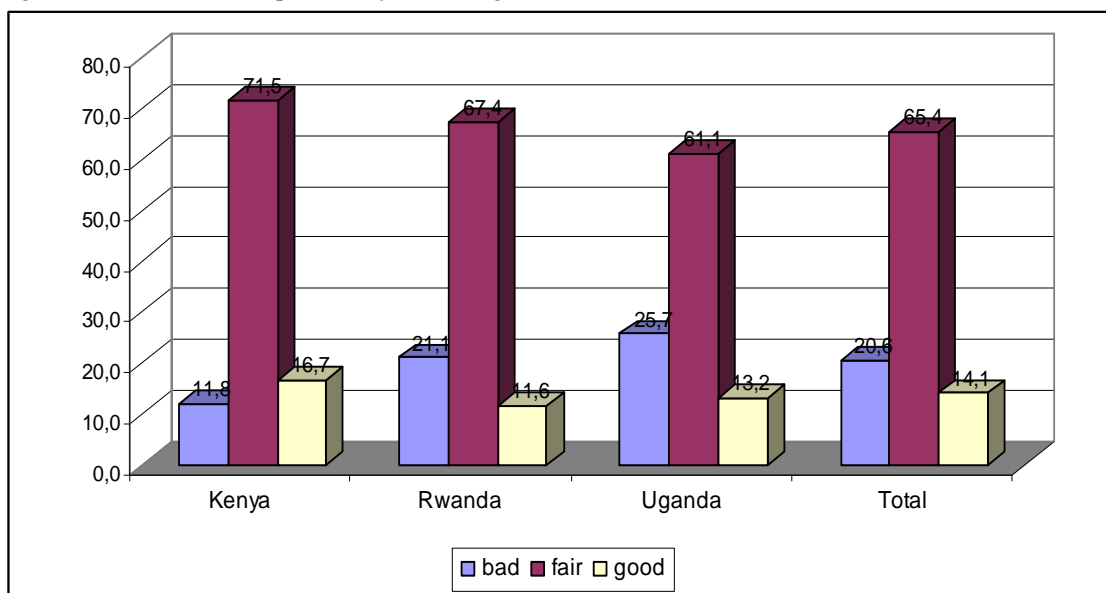
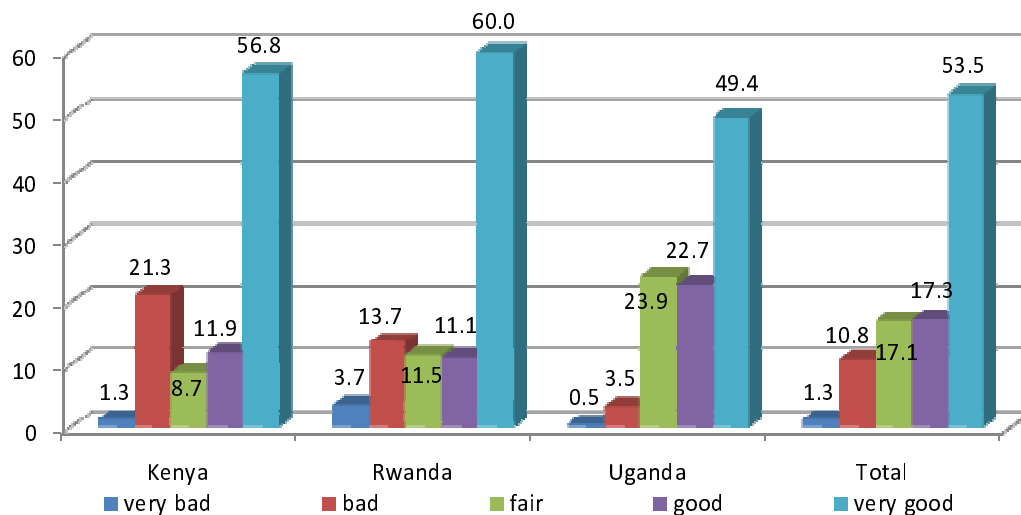


Table 4: Disease Index per country (Percentages)

	Country			Total
	Kenya	Rwanda	Uganda	
Bad	25,3	31,1	63,5	46,2
Not very good	19,5	14,7	11,3	14,5
Fair	30,8	35,3	9,1	20,1
Good	17,9	11,1	12,9	14,2
Very good	6,6	7,9	3,2	5,0
Total	100,0	100,0	100,0	100,0
(Absolute values-sample)	380	190	627	1.197

**Guardians and Care:** The quality of the care has been shown to be very good for most of the children, but the health and working characteristics of the guardians have showed a less optimistic situation, in particular because of the high average age of most guardians (especially in Rwanda), the incidence of HIV/AIDS (Uganda in particular), and the widespread irregularity of their working situations (Fig. 2).

Figure 2: Guardian Care Giving Index (Percentage)



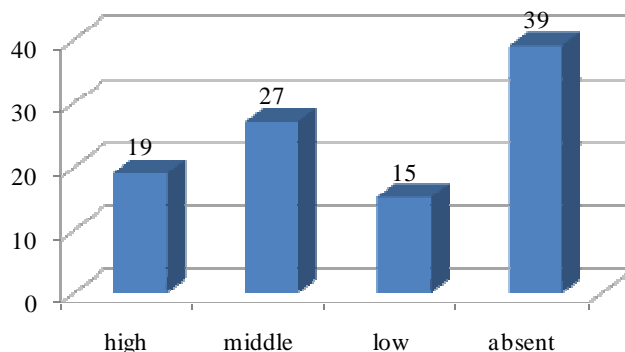
The overall economic conditions of the families appear to be very problematic. The level of cash income is considered insufficient or seriously insufficient for over 70% of the families, in particular those in Uganda and Kenya, and the incidence of debts hardly bearable or unbearable is very high (*Tab. 5*).

Table 5: Family Economic Wellbeing Index per country and area

		Area		Total
		Urban	Rural	
Kenya	Very bad	35,5	9,6	19,6
	Bad	45,2	42,9	43,8
	Fair	18,5	40,9	32,3
	Good	0,8	6,6	4,3
	Total	100,0	100,0	100,0
(absolute value-sample)		124	198	322
Rwanda	Very bad	0,0	0,6	0,5
	Bad	0,0	13,9	13,7
	Fair	50,0	65,0	64,8
	Good	50,0	20,6	20,9
	Total	100,0	100,0	100,0
(absolute value- sample)		2	180	182
Uganda	Very bad	12,8	7,9	9,6
	Bad	39,0	35,9	37,0
	Fair	43,6	52,6	49,5
	Good	4,6	3,6	3,9
	Total	100,0	100,0	100,0
(absolute value- sample)		195	365	560

Environment: One fifth of the sampled children live in areas exhibiting a high environmental risk, more than one fourth are exposed to middle level risks, mainly connected with the existence of bad hygienic conditions, and the rest (53.6%) is distributed between a minor group of children living in areas showing a low environment risk index (14.6%), and a bigger group (38.9%) which looks to be safe from the dangers considered here (Fig. 3).

Figure 3: Environment Risk Index (Percentage)



**Education:** Delay in the school path is very common among the children interviewed; almost two thirds of them had an irregular educational background accrued before entering the OVC program.<sup>12</sup> Rwanda exhibits the worst situation, most probably because of the effects of the genocide on the children’s attendance at school, while Uganda and Kenya show better and similar situations. The incidence of children being above the average age in their education path is higher in the rural areas of Rwanda (80.1 %) and Kenya (68.3 %), while in Uganda there is no relevant difference between rural and urban areas.

In all the three countries and according to the expectations, the delays are more common among older children, while with regard to gender the differences in schooling males in Kenya and Uganda exhibit delays in their educational path more frequently than females not only in primary but also in secondary school. Instead in Rwanda the gender difference is less favorable for females, especially at the secondary level (**Tab. 6**).

Table 6: Delay in the educational path within each country per gender and school level

		School level					Total
		Nursery	Primary	Secondary	Vocational	Other	
Kenya	Male	73,9	66,7	50,0	0,0	71,4	66,5
	Female	45,0	53,4	50,0	0,0	62,5	52,9
Rwanda	Male	0,0	82,6	72,2	0,0	100,0	78,0
	Female	50,0	82,1	85,7	0,0	0,0	80,4
Uganda	Male	50,0	68,8	56,9	100,0	18,2	63,3
	Female	100,0	62,6	51,4	50,0	47,4	59,8
Total	Male	61,1	70,5	58,3	100,0	54,5	66,7
	Female	58,1	63,6	55,7	50,0	52,8	61,2

Economic and family causes were identified as the most relevant factors in determining this phenomenon in each of the three countries, which is coherent with the families’ socio-economic situation outlined above.<sup>13</sup> In particular, the cost of school fees and the lack of school material are often unbearable for the families and lead to school drop-outs. Among the other causes reported with frequency in Kenya and Uganda is the sickness or death of a family member, while in

<sup>12</sup> The child has a delay in the education path when he or she is older than the average with regard to his/her level of education, according to the national legal standard.

<sup>13</sup> Among different kinds of causes in the delay of the children’s school path the following were addressed in the study: territorial causes (war and civil war, epidemics, drought, widespread violence), causes dealing with the school system (lack of teachers in the school, distance from the school, bad condition of the school), economic and family causes (cost of school fees, lack of school material, the child has been involved in job activities, disintegration of the family taking care of the child, the family/guardian doesn't recognize the importance of education, family move, sickness of one of the family members, death of one of the family members), causes dealing with the child (lack of motivation/lack of interest, difficulties in relationship with the teachers, difficulties in relationships with other children, bad friendships, lack of self confidence, cognitive deficiency, pregnancy, recurrent diseases, sickness, disability, the child was abducted)

Rwanda the most frequently recorded motivations for drop-out are the lack of school material, the involvement of the children in work and the family's lack of recognition of the importance of education (**Tab. 7**).

The child related causes are the second type of very important causes of delay. Among the most relevant are the lack of self confidence and sickness.<sup>14</sup> In Rwanda, the lack of self confidence is reported as a cause of the delay by almost 40% of the respondents.

A positive relationship exists between irregular educational background and the orphanhood status of the child: when orphaned, a child is at greater risk of being delayed in his/her school career.

Table 7: Causes of the delay (Q.8.2)

	Sex		Class of age		Kenya	Country			Area		Total
	Male	Female	06-12	13-16		Rwanda	Uganda	urban	Rural		
Territorial causes <sup>15</sup>	6,3	4,3	4,5	6,3	0,3	7,4	7,7	3,4	6,0	5,3	
School causes	10,3	8,8	8,6	11,0	3,4	10,0	13,4	11,1	9,1	9,7	
Economic and family causes	52,5	49,7	46,9	57,2	45,5	55,8	53,1	44,7	54,0	51,1	
Child related causes <sup>16</sup>	18,9	19,7	16,9	22,1	12,1	45,3	15,6	10,5	23,5	19,3	
Other causes	11,7	8,2	7,6	13,0	18,2	11,1	4,6	8,3	10,8	9,9	
Total respondents	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	
(Absolute values-sample)	592	599	685	507	380	190	627	351	804	1191	

In spite of this background, it is interesting to observe that in most of the cases school attendance is regular (94.5%) and that irregularity is extremely rare (5.5%).

In a limited way, the data show that the performance of the children in the OVC program is good relative to their school environments; the data behind this index does not rely on an objective measure of school performance directly comparable across schools, regions and countries, but on subjective measures of the child relative to his/her peers. Children living in urban areas exhibit lower school performance than those living in rural settings, most probably because the level of school quality is higher in the cities than in the countryside, thus vulnerable children are less likely to reach high performance relative to their peers in the city schools.

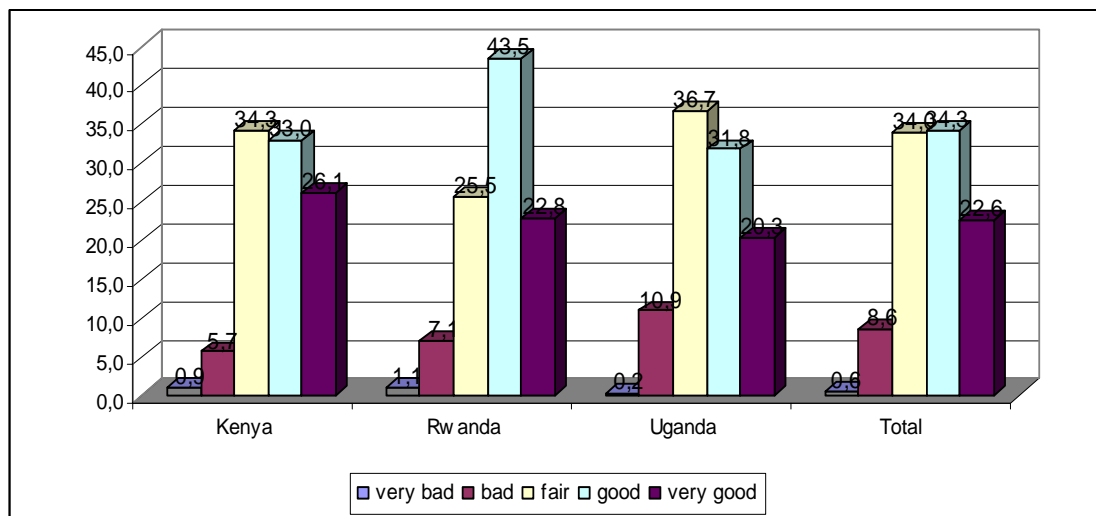
Correlating the School Performance Index with other relevant individual and collective indicators, a few of the main aspects influencing school performance were identified. There seems to be a direct correlation between the School Performance Index and both the level of family income and the children's quality of relationships with adults and peers. On the other hand, an opposite correlation exists between the School Performance Index and the number of children in the classroom and the cost of school fees.

<sup>14</sup> With regard to sickness, the intersection between the occurrence of this cause with the general health data and the disease index confirm the existence of a positive relation between the incidence of bad health conditions and the frequency of the school delay.

<sup>15</sup> See Footnote 13.

<sup>16</sup> See Footnote 13.

Figure 4: School Performance Index per country (Percentage)



The higher is the children’s probability of having positive relations with other adults and peers, the better the school results. This finding could be explained under different perspectives, but it is possible in this context to consider it as a combined effect of two main factors. First, sociability<sup>17</sup> is an indicator of the child’s psychological wellbeing/malaise which conditions his/her capacity of establishing positive relations not only with other persons, but also with his/her self. An excess of aggressiveness, for instance, restrains the child from utilizing affective and intellectual energies in a positive way, and therefore represents a handicap for learning. Sociability is then a pre-condition for every educational relationship. Sociability is a characteristic that is generally appreciated by people and especially by teachers who are usually more available, and more able, to establish a relationship with children not having character or behavioural difficulties; this is particularly true when teachers have to deal with many students in crowded classrooms, as the inverse relation between the sociability and the School Performance Index shows.

Secondly, aside from these variables of mainly a relational and psycho-social nature, the direct and indirect effects of the family’s economic difficulties appear to negatively affect the school performance of the children. Furthermore, it is worthwhile to highlight that a family’s educational level directly influences its economic status.

## Discussion

### Data as Test of Program Methodology:

The evaluation exercise and resulting data analysis has allowed for a test of the process by which AVSI and the local partner organizations have selected children to participate in this program. OVC implementing agencies and USAID have been engaged in an on-going debate over the most appropriate selection criteria and methods of selection of OVC within a community. A growing consensus has emerged that decision-making regarding the criteria and means of selecting participants should be made with a high-degree of participation at the community-level. AVSI has provided orientation and training to the partners, but fundamentally, the decision of who are the most vulnerable children and are therefore eligible for participation in the program has been deliberately left in the hands of the communities for a number of reasons. The data show

<sup>17</sup> A question (on the personality of the child was included in the questionnaire Q.5). Out of the four modalities presented - sociable, aggressive, unstable and shy – the last three were summarized in one, leading to the creation of a dichotomized variable (sociable/non sociable) that was easier to cross-tabulate with other variables.

that over 70% of the children and their families in these settings do not know the children's HIV status, so it is clear that selection is based on other factors.

The baseline study allows for a confirmation of the criteria being used by local partner organizations in selecting children for participation. The survey asked the social workers to select the vulnerability criterion that were most important determinants of an individual child's selection as a participant, and at the same time these selection criteria could be compared with the children's profile coming out from the baseline after exploring economic, family and health conditions of the children. The results of this comparison confirm that the criterion used by the social workers correspond to the actual characteristics of the children as emerged by the baseline analysis and validate to a certain extent the reliability of AVSI's local partners and social workers..

This data allows AVSI to identify trends across the three countries and affords the opportunity to cross-check the representativeness of the sample by comparing the frequency of orphans within the sample population and the frequency of orphans within the entire population of the OVC program.

Finally, according to the prevalence of AVSI selection criteria, Uganda has the highest percentage of guardians of sampled children affected by HIV/AIDS (23%). Its prevalence among the guardians is also high in Rwanda, while in Kenya it exhibits values even lower than the national average.<sup>18</sup> These results are moreover coherent with the information available at the national level: in Uganda 48% of the orphans are due to HIV/AIDS<sup>19</sup> and the incidence of adults living with HIV/AIDS is the highest among the three countries.<sup>20</sup> In any case it is important to point out that the degree of awareness of HIV infection and the extent of the phenomenon of stigmatization can have a big influence on the recognition and declaration of the state of infection. Therefore the incidence among Ugandan parents could be both due to a wider consciousness and/or actually higher rates of diffusion.

Another interesting evaluation result on AVSI's method is the comparison of the number of children sponsored in each family against the characteristics of the family. According to the results, multiple sponsorship appears to be connected with the number of family members, indicating that larger families are considered more vulnerable than smaller ones. The support provided by AVSI is moreover proportional to the families' economic conditions: the number of families receiving multiple sponsorship from the OVC program increases as the family economic well-being worsens.

#### Data as Baseline for Educational Progress:

The educational indicators showed surprisingly positive results for a very large majority of the children sampled, despite the significant trend of delay in the educational path. The sample showed an almost complete absence of irregularity in school attendance while within the AVSI support program. This trend seems to be connected with AVSI support which directly addresses one of the main causes of school irregularity: economic constraints. But while this result has emerged in the short period that the program has been underway, it is necessary to wait for a longer period and for another evaluation to test AVSI's effects on the incidence of other relevant

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18 It's important to remember that the data collected on HIV/AIDS give only a partial description of the prevalence of the virus among the guardians because of the high percentage of respondents who don't know their infection status.

19 UNAIDS, UNICEF, USAID, Children on the Brink 2004: A joint report of new orphan estimates and a framework for action'

20 Adults aged 15-49 years. According to the UNAIDS 2006 Report on the global AIDS epidemic, the estimate of the Adult (15-49) rate (%) in 2005 of people living with HIV is: 6,1 in Kenya, 3,1 in Rwanda and 6,7 in Uganda.

causes, such as the sickness of one of the family members or the lack of self confidence of the child.

Data as Tool for Impact Evaluation:

According to its longitudinal design, this survey will be conducted with the same sample in the upcoming years of this program. The data on discrete variables and the results from the synthetic indexes will provide useful information that will help program managers, donors and others understand the direction and degree of impact in a number of areas central to the well-being of the orphans and vulnerable children within this program. The evaluation tool will be limited in its capacity to generate a counter-factual scenario to account for external factors which are undoubtedly having an impact on the lives of these children. At the same time, the results will not be purely causal or attributable in exclusivity to AVSI's OVC program.

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