



Matunda and Silanga Toilets' Project Report

Rotary Club Leusden

Introduction

Matunda and Silanga are rural Public Primary School located east of Thika in Kenya. The two schools serve poor rural communities in a region that experiences long spells of drought due to poor weather patterns. The schools' community comprises mainly subsistence farmers who rely on rain fed agriculture. Matunda has a population of 929 children comprising of 490 boys and 439 girls, while Silanga has a population of 115 children comprising of 54 boys and 61 girls.

The two schools were identified to be in dire need for sanitization facilities (mainly toilets). It is for this reason that Macheo approached Rotary Club Leusden with a funding proposal to construct toilets and improve the children's school environment. To undertake the project in the two schools, an initial needs assessment was conducted and it was established that Matunda had only 10 cubicle toilets for girls and 8 toilets for boys, all of which were all in bad state and they were at a risk of flooding especially during the rainy seasons. Silanga had only 1 for the boys and 1 for the girls, which were also of very poor quality.

Overview

When Macheo received the money for the toilet project from Rotary club Leusden, a bill of quantities was obtained. This bill was provided to several contractors (to ensure they made their bids based on standardized requirements) as they made their quotations.

Pupils of Silanga and Matunda after receiving the new toilets



After opening of the tenders, 3 contractors qualified to construct the toilets. One was to construct the Silanga toilets (2 cubicle toilets for the girls and 1 cubicle toilet and a urinal for the boys) while the other two contractors were to construct 8 cubicle toilets for the girls, 4 cubicle toilets for boys and a twin urinal for the boys in Matunda School.

The signing of the contracts was done in the schools, a process that involved all the stake holders namely the parents, teachers, children and a representative of the government. The actual construction of the toilets started in July and the work was completed by the end of August. After the completion, the toilets were handed over to the schools, and children started using them at the beginning of the 3rd school term on the 1st week of September.

The project process also involved the training of parents, teachers and children on health and sanitation issues, by a public health officer who was invited on several occasions by Macheo Children's Centre.

Besides these steps in the process, Macheo also followed up the initial needs assessment with continuous measurement of the impact of the project. This was meant to show clearly whether the project had any impact on issues that it was meant to address.

Pupil and parent's survey



Project's impact assessment and results

1. Training of children, parents and teachers

Besides the construction of the toilets, parents, teachers and children were to be trained on healthy sanitation habits and good use/ maintenance for the toilets. The training was done at the start of the project and during the hand-over date. Macheo engaged the Thika East District public Health Officer to conduct these trainings.

During the training, the children, parents and teachers were encouraged to spread the knowledge to the people in their community.

The following tables and graphs show the attendance of the trainees;

Silanga School

Table

Trainee	Percentage of trained trainees	Target
Children	95%	100%
Parents	74%	70%
Teachers	100%	100%

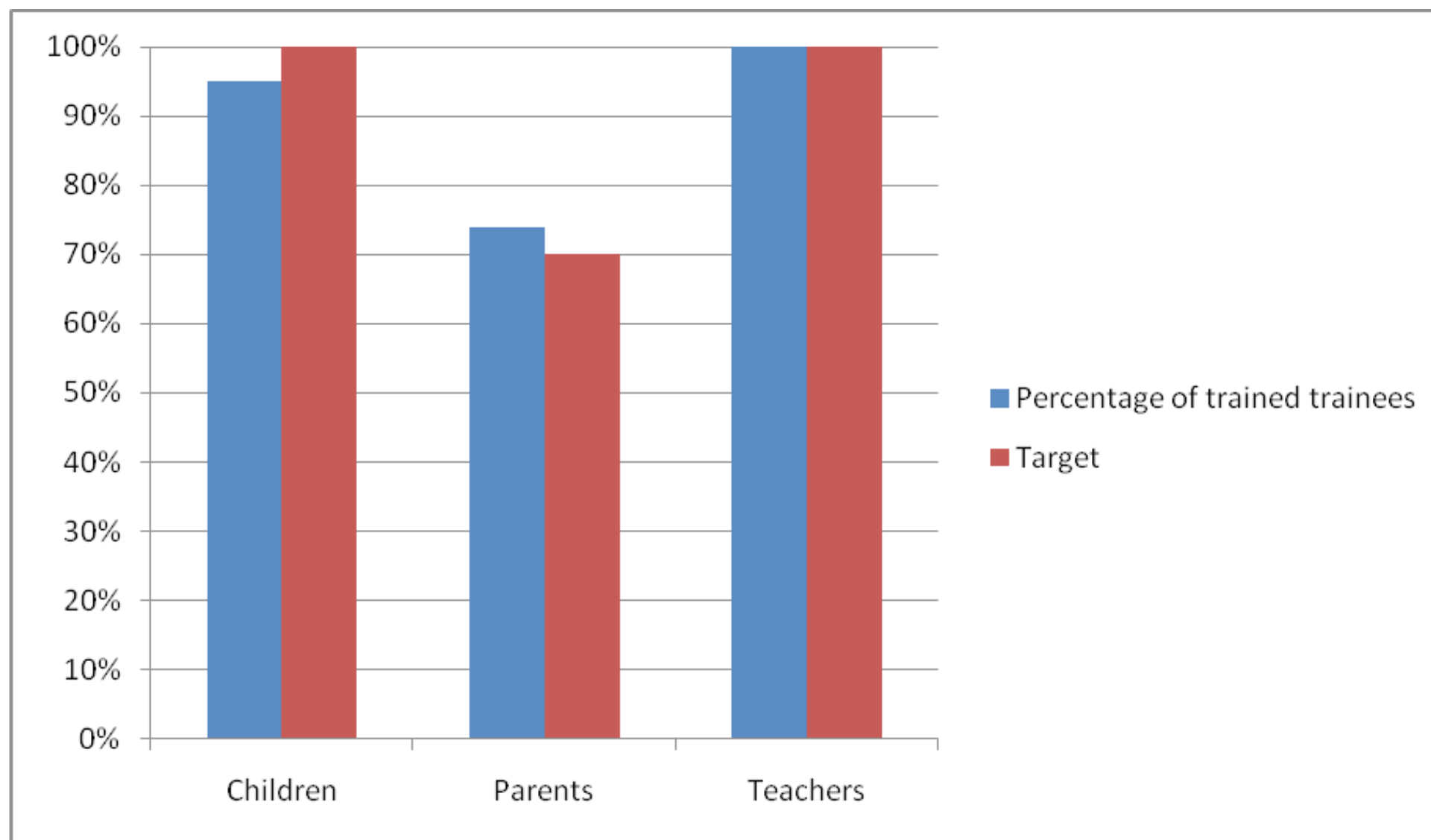
Matunda School

Trainee	Percentage of trained trainees	Target
Children	98%	100%
Parents	64%	70%
Teachers	100%	100%

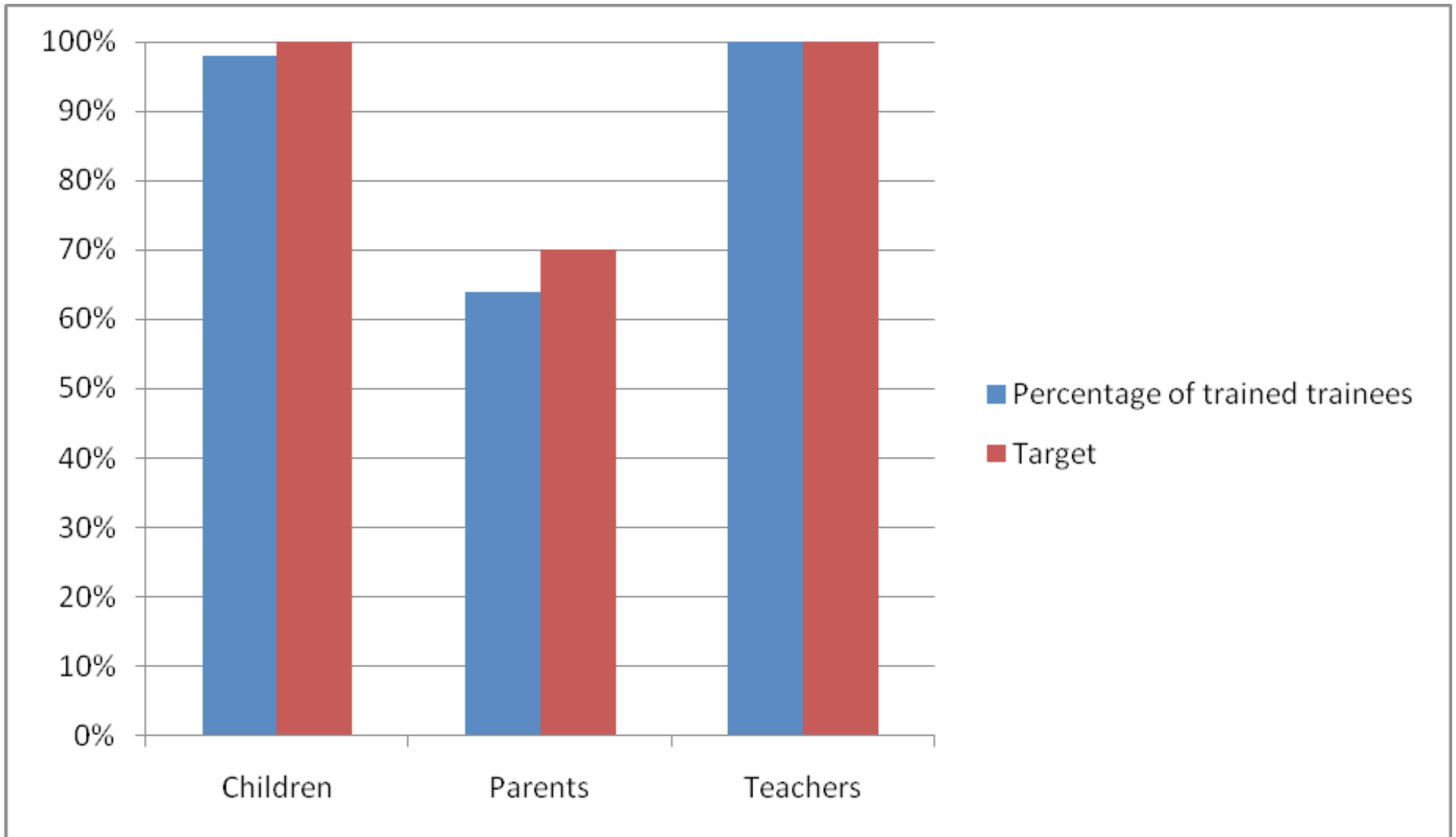
New Matunda girl's toilet



Silanga Graph



Matunda Graph:



2.A test on basic awareness on importance of sanitation

On inception, we carried out a baseline test on basic awareness and attitude on sanitation by children, teachers and parents. After the project implementation, we carried another test to establish if there was a change on these same attributes.

The analysis below shows improvement of awareness on importance of sanitation among the children, teachers and parents. Macheo Primary School Program, through its social workers will encourage the children and the parents to talk to their peers about proper hygiene and sanitation so that the knowledge can reach more people in the community.

Macheo Children's centre will continue to work on the awareness mainly for the children and parents on sanitation, mainly through its Primary School Program which runs in the school.

a. ***Silanga Primary School***

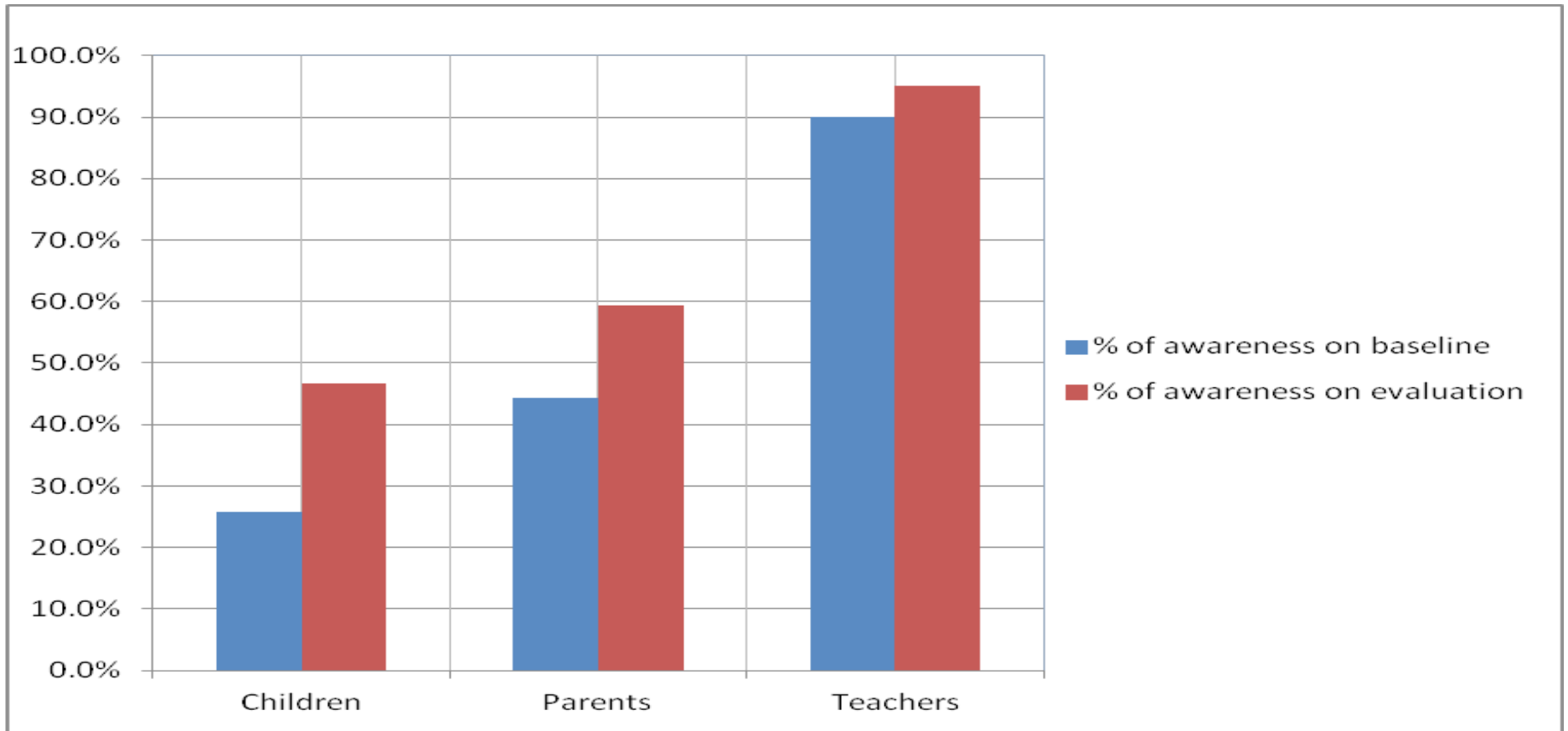
Table & Graph showing the percentage of awareness on importance of sanitation in Silanga

	% of awareness on baseline	% of awareness on evaluation
Children	25.7%	46.7%
Parents	44.4%	59.3%
Teachers	90%	97%

Teacher and parents survey in Matunda and Silanga school



Graph

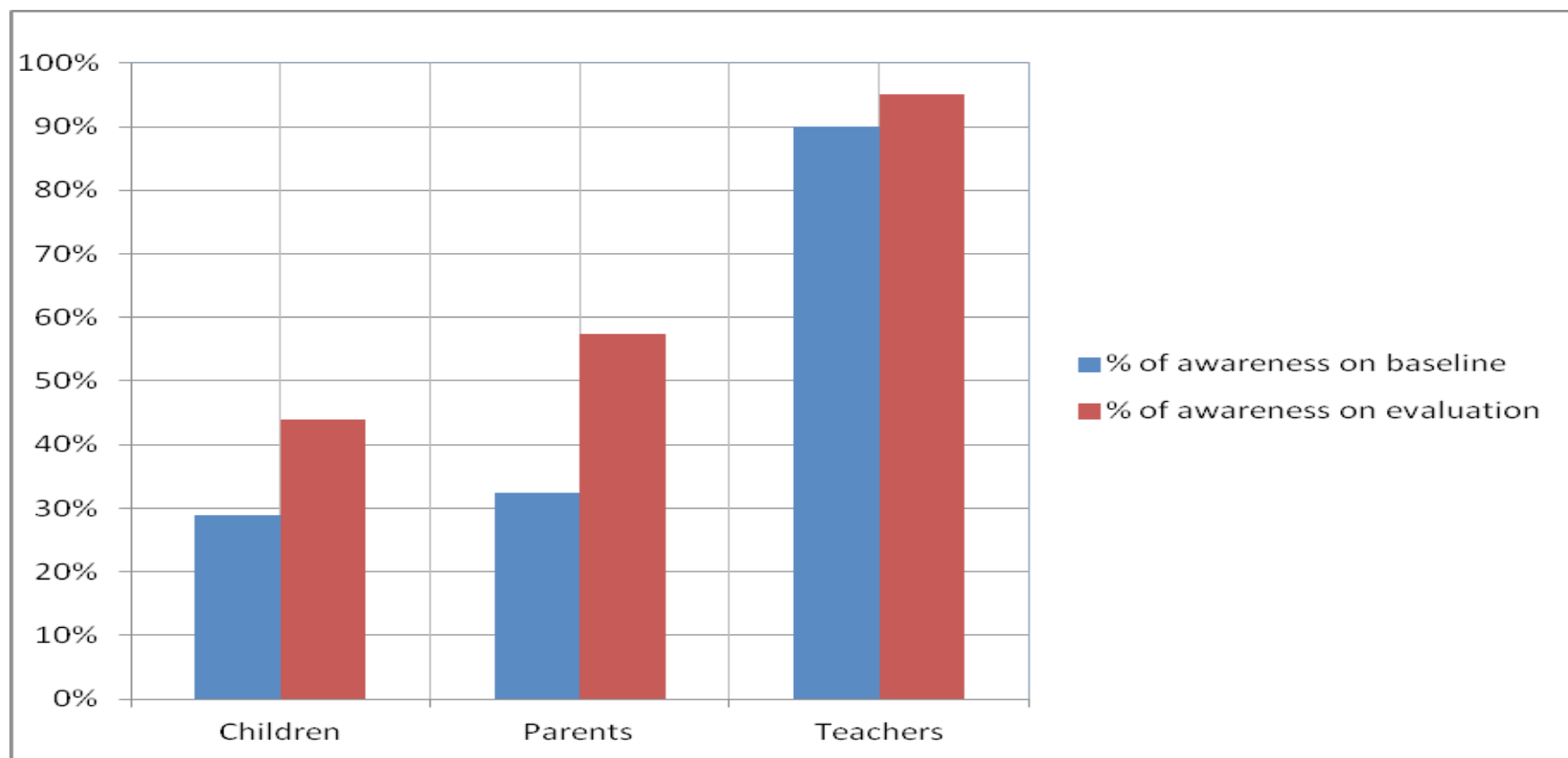


b. Matunda Primary School

Table & graph showing the percentage of awareness on importance of sanitation in Matunda

	% of awareness on baseline	% of awareness on evaluation
Children	29%	44%
Parents	32.5%	57.5%
Teachers	90%	95%

Graph:



3.A measure of number of toilets against the recommended international standards

After implementation of the project, the toilets in both Silanga and Matunda were adequate for the schools' population, therefore meeting the World Health Organization (WHO) recommendations of 25-30 girls per toilet and 50-60 boys per toilet with a 50cm urinal. Though initially there was two toilets shared between boys and girls in Silanga School, these toilets were deemed to be non-existent since they were of very poor quality and could not be used by children any more.

The other thing that was hindering good sanitation standards was lack of water for hand washing in Silanga School. This has since been addressed by Macheo which bought and installed 2 water tanks through another donor. This will ensure that the pupils have sufficient water for hand washing. The water is sourced from rain harvesting.

Matunda Primary school has been using tapped water from a nearby community bore hole. However, the water is not enough for the school's population. To improve sanitation in Matunda School, Macheo through another donor bought 2 water tanks as well. The rain water will also be sourced from rain harvesting. The 2 tanks will supplement the current amount of water. The water tanks will be fully installed early this year (2015).

The following tables and graphs show the number of toilets before and after the implementation of the project against the World Health Organization standards;

a.Silanga Primary School

Table:

Ratio of children per toilet: Silanga primary School						
	Before project		After project		WHO Standards	
	No of children	No of toilets	No of children	No of toilets	No of children	No of toilets
Boys	54	0	54	1 + 1 urinal	54	1 + 1 urinal
Girls	61	0	61	2	61	2

b. Matunda Primary School

Ratio of children per toilet: Matunda primary School						
	Before project		After project		WHO Standards	
	No of children	No of toilets	No of children	No of toilets	No of children	No of toilets
Boys	490	4	490	8+2 urinals	490	8+2 urinals
Girls	439	8	439	16	439	15

4. An analysis of school attendance trends and reasons for absenteeism

According to Macheo's findings during the survey, we could not establish if the improvement in sanitation registered in both schools directly affected absenteeism. We feel that the period of the survey was not enough to make a clear judgment. The Primary School Program will keep on tracking the number of absentees to collect enough data over sometime to show a clear trend.

The absenteeism trend and the average number of days absent among children in Silanga declined after the implementation of the project. In Matunda School the number of absentees increased but the average number of days absent decreased.

Disease prevalence and types of diseases in children (mainly the infectious diseases)

The prevalence of most sanitation related diseases reduced after the implementation of the project and training except that of stomachache and worms. During the survey, we asked the children the name of the hospital where they were treated. Later we confirmed the data from the said hospital.

The program will continue to provide the dewormer tablets to the children. During deworming activity, the children will be reminded on good sanitation habits; for example, hand washing with soap after visiting the toilet and before taking their meals. The program usually involves the public health officer to facilitate the trainings.

In addition, the program will continue collecting data on prevalence of sanitation related diseases over time to show a clear trend.

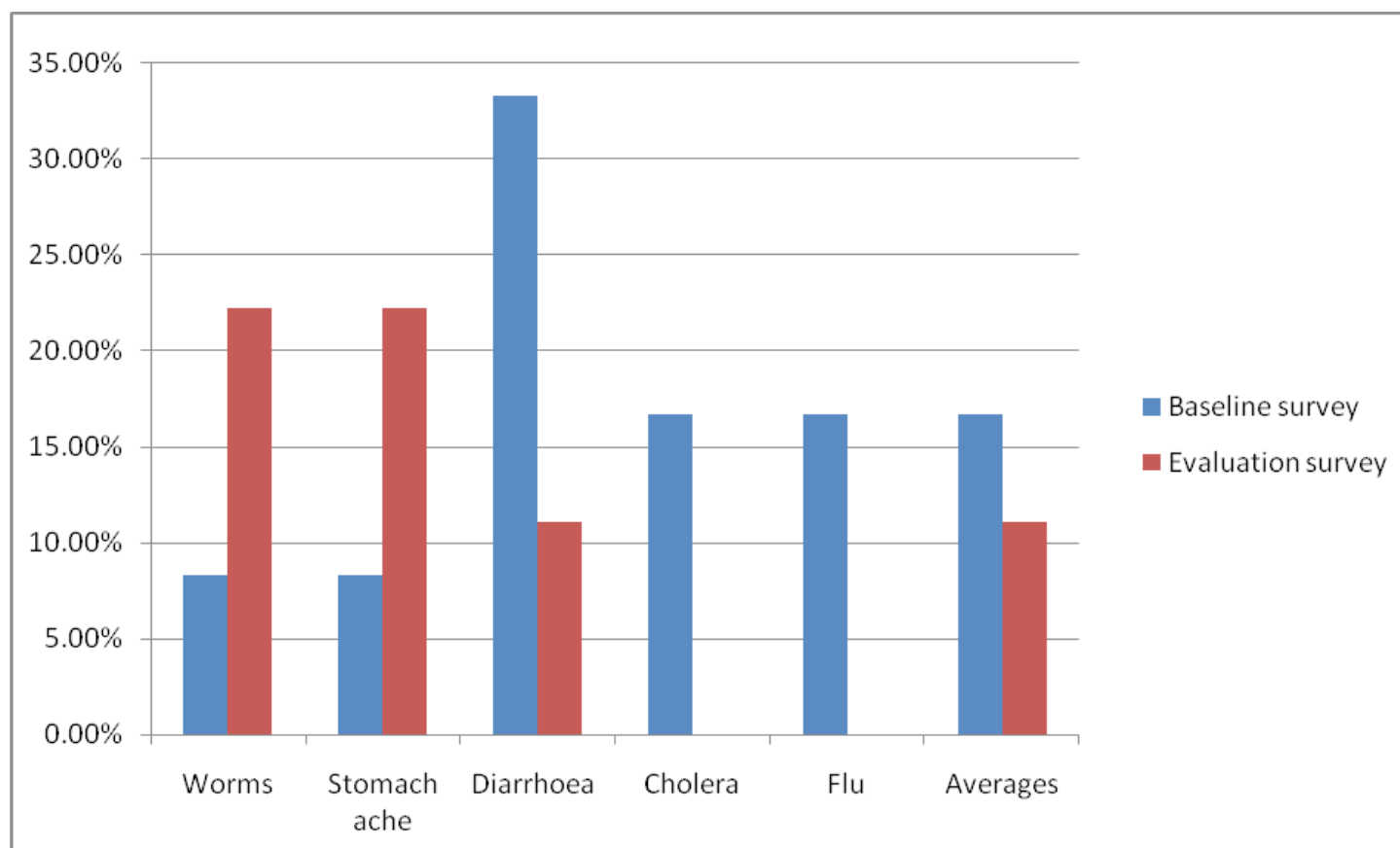
Macheo also feels that over time the children and the parent will put into practice many of the practices they learn through public health office. This will reduce the rate of infections that are related to poor hygiene.

The table and graph below show the percentage in prevalence of sanitation related diseases;

a.Silanga Primary School

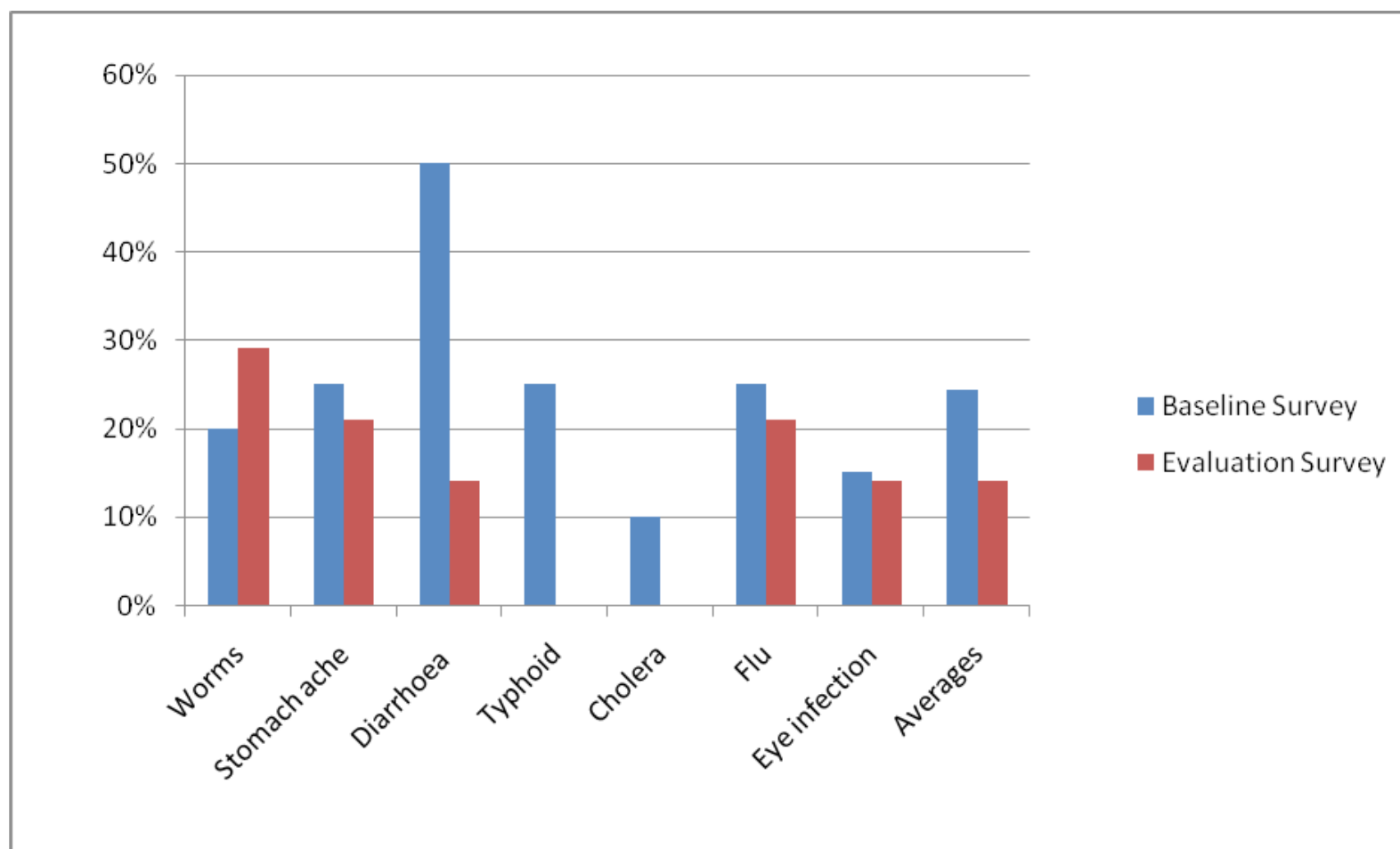
Table and graph:

Disease prevalence and types of diseases in children (mainly infectious)	Baseline	Evaluation
Worms	8.3%	22.2%
Stomach ache	8.3%	22.2%
Diarrhoea	33.3%	11.1%
Cholera	16.7%	0.0%
Flu	16.7%	0.0%
Averages	16.7%	11.1%



b. Matunda Primary School table and graph

Disease prevalence and types of diseases in children(mainly infectious)	Baseline	Evaluation
Worms	20%	29%
Stomach ache	25%	21%
Diarrhoea	50%	14%
Typhoid	25%	0%
Cholera	10%	0%
Flu	25%	21%
Eye infection	15%	14%
Averages	24.3%	14.1%



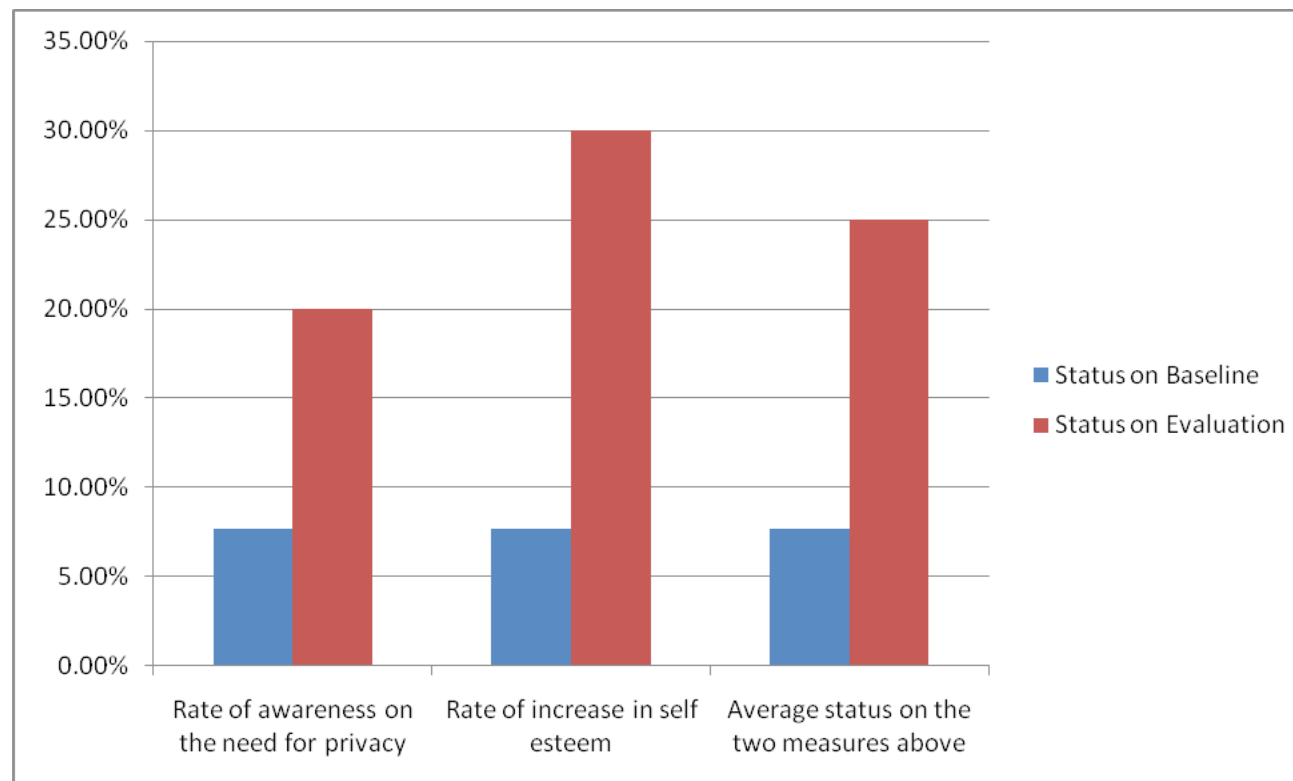
Psychological outcomes such as shame or discomfort to use the toilet

The awareness among the children on psychological effects that are aggravated by poor sanitation conditions increased after the implementation of the project and training. During the baseline data collection, a number of children seemed not to mind to use poorly constructed toilets or even to defecate in the open fields. This changed after the implementation of the program. The following tables and graphs show the percentage of awareness in both Silanga and Matunda schools;

a.Silanga Primary School

Table and graph

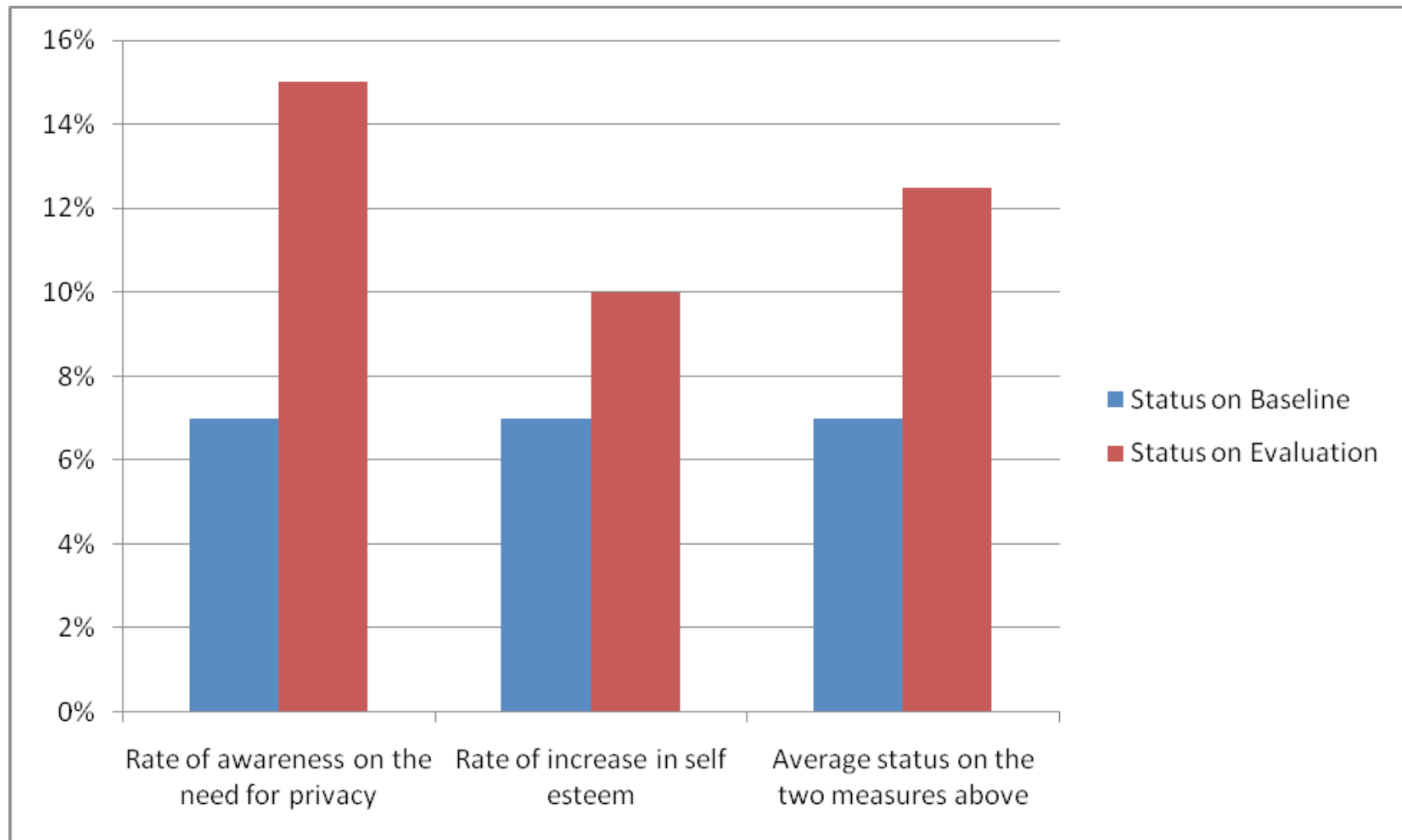
	Status on Baseline	Status on Evaluation
Rate of awareness on the need for privacy	7.7%	20.0%
Rate of increase in self esteem	7.7%	30.0%
Average status on the two measures above	7.7%	25.0%



b.Matunda Primary School

Table and graph:

	Status on Baseline	Status on Evaluation
Rate of awareness on the need for privacy	7%	15%
Rate of increase in self esteem	7%	10%
Average status on the two measures above	7%	12.5%



Other observations/effects of the project

(i) Toilet cleanliness

Before implementation of the project and trainings on sanitation, the toilets were dirty and stinky. The boys' toilet in Silanga had poor drainage and was retaining water and urine on the floor while the boys' toilets in Matunda were almost full with larvae coming to the surface.

During the evaluation after the training, both the new and old toilets were very clean and well maintained. The 2 latrines that have been filled at Matunda primary school had also been locked up.

(ii) Solid waste management/ compound

The schools also improved in terms of solid waste management. During the baseline survey in Silanga, their school dust pit was full and overflowing.

After the training, an evaluation showed that Silanga had 1 newly dug pit. We also noted that they burn the litter at least once in a week.

In Matunda, the pit was not full but they had not burnt the litter in the pit during the baseline survey. During evaluation, we found that they also burn litter on a weekly basis and had dug one more pit which is also well maintained.

Dilapidated Silanga toilets and the new toilet



(iii) Clean and safe water for drinking

During our baseline survey in Silanga School, most of the pupils had to carry water from home; the water was sourced from a nearby dam and hence not clean or safe for drinking. After the implementation of the project, Macheo bought and installed 2 water tanks for Silanga school so that they would have enough water for drinking and hand washing.

In Matunda School before the implementation of the project, the water in the schools was safe for drinking but not enough. The water is tapped from a nearby community borehole. As said earlier in this report Macheo will install 2 tanks to supplement the tapped water.

(iv) Cleanliness of the buildings and classrooms (floor, walls, corridors e.t.c)

In Matunda, the classes are well swept but there is too much dust since the floors are not yet cemented, and the door and windows have not yet been put up so as to block dust from the field.

In Silanga, the classes were very dirty and cluttered with papers. They also acted as storage for construction sand and food items for the school feeding program. After the training, the classes were kept clean and well swept. The food items are still kept in class but the construction sand was taken outside.

Matunda's play ground and rubbish bit



(V) Status of the compounds

In Matunda, there is overgrown grass in the field but no bushes. The compound is very dusty so they pour dirty water from the kitchen around the school compound to contain the dust. We recommend that they plant grass and more trees around the school compound and field as a long term measure to contain the dust.

In Silanga, there was a lot of overgrown bush and grass. The parents propose that the bushes be cleared and more trees be planted around the school.

(vi) Rubbish Bins

There is no rubbish bin in either of the school. In Matunda however, the teachers have improvised a carton for a dust bin in the staffroom. Macheo recommended to both schools to put rubbish bins in each classroom and in the compound too.

Old and new Matunda boy's toilets



Financial Report Silanga & Matunda Toilets Project- Rotary Club Leusden

	Actuals (May-Dec 2014)	Budget (May-Dec 2014)	Actuals (May-Dec 2014)	Budget (May-Dec 2014)
Project Donations/ Incomes	Amount in Kes	Amount in Kes	Amount in Euro	Amount in Euro
Donation RC Leusden- Phase I & II (Received 11th April 2014)	118,750	115,000	1,000	1,000
Donation RC Leusden- Phase III (Received 17th Nov 2014)	440,000	460,000	4,000	4,000
Donation RC Leusden- Phase IV & V (Not received yet)	0	460,000	0	4,000
Total received income- Toilets project	558,750	1,035,000	5,000	9,000
Project Expenses Breakdown				
Project Research & Design	36,416	109,250	326	950
Toilets Construction (Silanga School - 1 block for boys & girls)	260,000	225,000	2,327	1,957
Toilets construction (Matunda School - 2 blocks for boys & girls)	640,000	640,290	5,727	5,568
Management & supervision of construction work	21,004	21,710	188	189
Community training/ capacity building	8,000	10,000	72	87
Impact assessment (Monitoring & Evaluation)	23,500	28,750	210	250
Total Project Expenses (Final costs)	988,920	1,035,000	8,849	9,000
Project balance (To request from RC Leusden)	(430,170)	-	(4,097)	0

Financial explanation

In 2014, we received two donations of 1,000 EUR and 4,000 EUR from RC Leusden for this project. The two amounts were exchanged at a rate of KES 111.75 and have used the same rate to convert the project costs into Euros. The project has been completed as per the initial plan. The financial overview above shows a financing gap which is equivalent to the pending funding from RC Leusden of approximately 4,000 Euros. We are therefore requesting for the final funding amount for the project to be completely covered.

Appreciation

On behalf of the children of Matunda and Silanga primary schools and all the stake holders; Macheo thanks Rotary Club Leusden very much for their efforts to make the project successful. The children are now learning in a healthier environment. The project has also made the two schools more child friendly. We believe that the project will contribute greatly in achieving the other goals of the Primary School Program.

Thank you very much!