



HHDF

Home Pure Water Systems

Pure Water Study Result Presentation

Daniel Jinnefält

This study is made by HHDF in cooperation with Chipata Municipal Council in order to find out how distribution of facilities to access Pure Water in rural areas affect the general health of people living in the villages of Chipata District. The result from the study has proven that the HHDF Home Pure Water System high quality filter solution improves the general health and livelihood of the rural people significantly. The good result in this study is supported by laboratory tests done by Health Laboratories under the authority of Chipata Municipal Council Health Inspector at two different occasions showing that the everyday water in the rural area contains very high amounts of bacteria. The same water after being purified in HHDF Home Pure Water Systems has however no bacteria content whatsoever - shown by the Chipata Municipal Council laboratory test results. Furthermore the beneficiaries of the Pure Water express a high appreciation regarding the clearness, taste, color, smell and lack of dirt, algae's, worms and decomposing organic matter in the Pure Water. The Pure Water beneficiaries' also express a positive attitude regarding the pricing of the Home Pure Water System considering the fact that none of the Pure Water beneficiaries have found it necessary to visit hospital or clinic during the 12 weeks study period since they have started drinking Pure Water and hence have saved substantial economical costs from the use of the HHDF Home Pure Water System.



Human Health Development Foundation

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Introduction

Human Health Development Foundation, HHDF, is a Non Governmental Organization that primarily aims at supporting people in developing countries to attain Human Health. We see water as the main key to health. We therefore focus on providing pure water in rural areas. HHDF create economical independence and every part of our program is self sustainable economically to guarantee the continuance of our commitment to the rural people.

HHDF - Home Pure Water Systems

The first Step towards a good health is to attain Pure Water for the people in the rural areas. For this HHDF have started production of HHDF Home Pure Water Systems. Our mission is to produce supreme quality water, to a low cost, for usage in rural areas. Since the body consists to a degree of 70 % of water, and water is the most important nutrient transport component in the body, the quality of the water that you drink is of supreme importance. With Pure Water the body will be able to handle the daily transportation of nutrients and give a perfect maintenance of the organs and the immune system. If the water we drink however is not pure this will cause a full access for bacteria, fungus, virus, amoebas and other parasites to enter into the body through the drinking water. These parasites drastically harm the functions of the body and paralyze the very immune system itself. The immune system is then not able to protect the body when malaria and other types of parasites, virus and bacteria try to enter the body. This means that the body will not be able to push out these aggressors and we end up being sick. If we, though, drink only Pure Water our body will have much better powers to handle and kick out the alien ill doers. HHDF in cooperation with Chipata Municipal Council in 2007 initiated a health study on water quality with the intention to provide Pure Water. In this cooperative study HHDF and Chipata Municipal Council have been looking on the effects of Pure Water in the Dumisa Village in Chinyaku Chiefdom, Chipata, Eastern Province of Zambia. See Appendix A1. HHDF has been working very close to the people in this village for a longer period. From the experience grown from the study we intend to implement the success parts of the study for a greater need in a wider area in cooperation with Chipata Municipal Council. In order to fully understand the benefits of the Home Pure Water System project we therefore started the Pure Water study in April 2007 until July 2007. The study was done during 12 weeks with a beneficiary group of 25 people and a control group of 20 people making a total of 45 people. See Appendix A1. We have looked at 8 questions from the Scientific Form nr 36 considering the changes in general and 5 questions considering specific health among the study participants and we also have looked at the most common illnesses in the area. We have evaluated the results in order to objectively see if the introduction of Home Pure Water Systems makes any significant difference regarding health for the benefactors of the project. See Appendix A2 – A4.



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Results

1	Mwacidure umoyo wanu uli:	In general would you say your health is:	Ulibwino Kwambiri /Excellent	Ulibwino /Very good	Bwino /Good	Nkhasako /Fair	Suli Bwino /Poor
			1	2	3	4	5

The situation before the introduction of the HHDF Home Pure Water System was rather bad according to the general opinion among the people in the study. They state that their health was Fair which is the next worse alternative for this question. After the 6 week study the control group - that did not benefit from Home Pure Water System experienced an even worse situation health wise. They state that their general health is now Poor which is the worst possible answer alternative for this question. Simultaneously the beneficiaries of the Pure Water, after 6 weeks with HHDF Home Pure Water System, unison answer that their health is Excellent.

ALL Before	Control After	ALL Pure Water Beneficiaries After
4 - Fair	5 - Poor	1 - With HHDF Pure Water My Health is Excellent

2	kulinganzandiza ndi umoyo munali nao chaka cimodzicapitapo mungatibw umoyo wanuuli bwanji?	Compared to one year ago, how would you rate your health in general now today?	Ulibwino Kwambiri - Mbiri /Much better	Bwino Pan'gono /A Little better	Chimodzi - Modzi /About the same	Oipa Pan'gono /A Little worse	Oipa Kwambiri /Much worse
			1	2	3	4	5

Before the introduction of HHDF Home Pure Water Systems all of the participants found their situation to be Worse compared to one year ago. After the 6 weeks study the control group that had not the benefit of Pure Water felt even much worse whereas the beneficiaries of the Pure Water felt Much Better which is the best statement alternative for this question.

ALL Before	Control After	ALL Pure Water Beneficiaries After
4 - Worse	5 - Much Worse	1 - With HHDF Pure Water My Health is Much Better than last year

3	Kodi umoyo sukkulolani kucitaizi?	Does your health now limit you in these activities? If so, how much?	Inde Kwambiri /Yes a lot	Inde Pan'gono /Yes a little	Iai/No, not at all
	Kuyenda mtunda wopitilila milosi imodzi	Walking more than a km	1	2	3

For all of the people in the village it was difficult to walk more than a km before the introduction of the HHDF Pure Water and the participants in the control group got even worse during the time of the study. For the beneficiaries of the Pure Water the situation fully changed and they found no problem when it came to walking and also not doing vigorous activities, such as running, lifting heavy objects, participating in strenuous work, climbing a large hill, lifting or carrying groceries plus moderate activities, such as moving a table, pushing a heavy object, walking far bathing or dressing, bending, kneeling or stooping.

ALL Before	Control After	ALL Pure Water Beneficiaries After
1 - Yes a Lot	1 - Yes a Lot	3 - With HHDF Pure Water I have had NO Limitations at ALL walking half a km



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4	Masapata anai ndi awiri apitawa kodi muna mnaunaku kuma kunako mawuto okuza umoyo wanu	During the past 6 weeks, have you had any of the following problems from your physical or emotional health?	Inde /Yes	Iai /No
	Kodi munacesako nthawi yogwirira ntchito kapena zocita zina	Cut down the amount of time you spent on work or other activities.	1	2

All of the people in the study found their health regarding physical and emotional problems to limit their capacity for working efficiently before the introduction of Pure Water. These problems remained among the participants in the control group while the beneficiaries of Pure Water state that they have no problems or limitation in their working capacity since they started drinking Pure Water.

ALL Before	Control After	ALL Pure Water Beneficiaries After
1 - Yes	1 - Yes	2 - With HHDF Pure Water I have had NO cut down in Time spent on Work due to physical problems

5	Masabata anai ndi awiri awiri apitawa mwanjira yotani yomwemwakhalamukumbvutika ndi ntchitoabwenzi..oyandika nao mabungwe.	During the past 6 weeks, to what extent has your physical health or emotional problems interfered with your normal social activities?	Palibe /Not at all	Pan'gono /Slightly	/Moderately	Quite a bit	Extremely
			1	2	3	4	5

Before the introduction of Pure Water all of the participants found that their physical and emotional health interfered in their social activities. After the 6 weeks the control group found the situation to have worsened further. Among the beneficiaries of Pure Water all participants stated that they were fully unlimited and could gladly take part in any of their social activities.

ALL Before	Control After	ALL Pure Water Beneficiaries After
4 - Quite a bit	5 - Extremely	1 - With HHDF Pure Water I have had NO social limitations due to physical health or emotional problems

6	Masabata anai ndi awiri apitawa kupwanya kapena kupweteka kwa nthupi kunabweza ntchito ya nthawi ndi nthawi motani kodi?	During the past 6 weeks, how much did pain interfere with your normal work - including both work outside the home and housework?	Not at all	A little bit	Moderately	Quite a bit	Extremely
			1	2	3	4	5

Initially all of the study participants had pain to a degree that they stated as the second worst answer alternative for this question regarding pain interfering with their work. For the control group these problems worsened during the study 6 weeks to become Extreme. For the beneficiaries of Pure Water they soon found that the pain they had suffered from so badly was disappearing and after some 2 to 3 weeks they no longer experienced any interference of pain affecting their activities.

ALL Before	Control After	ALL Pure Water Beneficiaries After
4 - Quite a bit	5 - Extremely	1 - With HHDF Pure Water I have had NO limitation due to pain



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7	Awa mafunso ndiokhuza momwe mumbvela ndimomwe zinali masabata anai ndi awiri apitawa	These questions are about how you feel and how things have been with you during the past 6 weeks.	All of the time	Most of the time	A good bit of the time	Some of the time	A little bit of the time	None of the time
	Kodi unali ndi mphambvu kwambiri?	Did you have a lot of energy?	1	2	3	4	5	6

Initially the participants in the study found themselves only being full of energy a little bit of the time. It then got worse during the study period for the people in the control group drinking the normal water for the general population. The beneficiaries of Pure Water however have since they started drinking Pure Water been full of energy and pep all of the time.

ALL Before	Control After	ALL Pure Water Beneficiaries After
5 - Little of the time	6 - None of the time	1 - With HHDF Pure Water I have been full of Pep ALL of the time

8		TRUE or FALSE	Definitely true	Mostly true	Don't know	Mostly false	Definitely false
	Ndikuyembeza thanzi yanga kutha kothelatu	I expect my health to get worse!	1	2	3	4	5

The general opinion among the village study participants - before taking part in the HHDF Home Pure Water Study - was that they found it very likely that their health would get worse in the future. After having been drinking Pure Water the beneficiaries of the Pure Water however state that they have no expectancy whatsoever of having worse health but the very opposite.

ALL Before	Control After	ALL Pure Water Beneficiaries After
2 - Mostly True	2 - Mostly True	5 - With HHDF Pure Water I Defiantly do NOT expect my Health to get worse

9	Kwamasabata anai ndi awiri apitawa kodi thanzi yakhuzidwa motani ndi matenda Mumimba motulula, Kamwadzi , Chifuwa, M' mimba monyonga, Kupwanya mnkhongono i Malungo	During the past 6 weeks, how much physical health interfered due to Diarrhea, Dysentery, Cough, Stomach Pain, Pain in joints and feet and Malaria	All of the time	Most of the time	Some of the time	A little bit of the time	None of the time
			1	2	3	4	5

Generally people in the village study suffer from physical problems due to Diarrhea, Dysentery, Cough, Stomach Pain, Pain in joints and feet and Malaria most of the time. This bad situation remains within the control group that did not enjoy the Pure Water. The beneficiaries of Pure Water however have no problem with any of these diseases after starting drinking Pure Water.

ALL Before	Control After	ALL Pure Water Beneficiaries After
2 - Mostly	2 - Mostly	5 - With HHDF Pure Water I have NOT had Diarrhea, Dysentery, Cough, Stomach Pain, Pain in joints and feet or Malaria at ALL



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Discussion

The Home Pure Water System study made by HHDF in cooperation with Chipata Municipal Council was done in order to find out how distribution of Pure Water facilities in rural areas will affect the general health of people living in the rural villages. This study performed in Chipata District has proven that the HHDF Home Pure Water System high quality filter Pure Water solution improves the general health and livelihood of the people significantly – The Pure Water Beneficiary Group results in comparison to the Control Group show highly significant change according to a two sided paired test ($p < 0.0001$) at After the Pure Water 12 weeks Study, while at start there is no significant difference between the Control Group and the Pure Water Beneficiary Group. See Appendix A4. Initially all of the participants in the study generally stated that their health, work capacity and emotional wellbeing, was very poor. For the study participants in the control group, who did not benefit from the Pure Water during the study period, this bad situation worsened during the 12 week Pure Water study. The health regression in the control group is regarded as being due to stagnation in the water used for cooking and drinking given that there is a water flow reduction after the rain season has ended. This health collapse is expected to become much worse as the stagnation aggravate and this will go on until the dry period ends some seven months later and the rain period starts. At this point however the situation will be intolerable regarding the negative impact on the health for the rural population due to bad water quality. Three people in the control group expected to die during the upcoming dry period and the results from the health investigation point in this direction.

The participants that are beneficiaries of the HHDF Home Pure Water Systems have despite the health drop among the general population in the study area had a health improvement that is no less than remarkable. In many cases the question responses from the Pure Water beneficiaries is the most excellent alternative in the Scientific Form 36. The good result in this study is supported by laboratory tests done by Health Laboratories under the authority of Chipata Municipal Council Health Inspector at two different occasions and at MoH Laboratories. In these tests the raw natural water that people in the village normally drink has been tested for bacteria in laboratory for water before and after it has been purified through the HHDF Home Pure Water Systems. The results clearly show that the everyday water in the rural area contains very high amounts of bacteria. The same water after being purified in HHDF Home Pure Water Systems has no bacteria content whatsoever shown by the Chipata Municipal Council laboratory test results. See Appendix A5. Furthermore the beneficiaries of the Pure Water express high appreciation regarding the clearness, taste, color, smell and lack of dirt, algae's, worms, larva and decomposing organic matter in the Pure Water. The Pure Water beneficiaries' also express a positive attitude regarding the pricing of the Home Pure Water



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System of 100.000 ZKW regarding that none of the Pure Water beneficiaries have had the need of visiting a hospital or clinic during the 12 weeks study period since they started drinking Pure Water. This health increase for the Pure Water beneficiaries was saving these families between 60.000 and 100.000 ZKW during the 12 weeks of the study. Considering this cost saving capacity of the Home Pure Water System, the participants in the study found the cost by 50.000 ZKW per year for maintenance of the Home Pure Water System to be very agreeable and they have recommended the Home Pure Water Systems to the extended family and neighbors. The beneficiaries find that the Pure Water give them good health and strength to work efficiently without fear of illnesses, constituting emotional stability and a good mental wellbeing providing good social relations.

Conclusion

With HHDF Home Pure Water System people do not fall into the despair of harmful water borne diseases. No matter what is a person's present health diagnosis; with Pure Water they have a great possibility to build up a healthy and prosperous lifestyle with the addition of Good Nutrition. The United Nations World Health Organization (WHO) and the Food and Agriculture Organization (FAO) suggest a strong link between bad water and the death rate of people suffering from incurable diseases. For a better health and for a prosperous future we need to exclude bad water and to bring in Pure Water that is good for the human body and gives the opportunity to build a strong immune system to fight off bacteria, fungus, virus, amoebas and other parasites causing infections and lethal diseases such as Malaria, Dysentery and Diarrhea. By drinking Pure Water we can better stay healthy and strong. We will then be in shape to take care of the everyday work and fully support our family.

We are with anticipation looking forward to your response of this initiative and for us to begin a full cooperation supporting the people in the rural areas to attain Pure Water for good health.

Daniel Jinnefält

Program Manager - Human Health Development Foundation

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APPENDIX

A1. HHDF Home Pure Water System Project - Pictures from Project



General drinking water from Well - High in content of Bacteria, Dirt, Worms, Larva, Decomposing Organic Matter and Algae's.



Pure Water Beneficiary Group with HHDF Home Pure Water System in Dumisa, Chinyaku Chiefdom, Eastern Province of Zambia.



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A2. SF-36 Health Status Questions: HHDF Home Pure Water System Project

1	Mwacidure umoyo wanu uli:	In general would you say your health is:	Ulibwino Kwambiri /Excellent 1	Ulibwino /V. good 2	Bwino /Good 3	Nkhasako /Fair 4	Suli Bwino /Poor 5
2	Kulinganiza ndiza umoyo munali nao chaka cimodzi capitapo mungalinganidze bwanji ndi umoyo wanu lero?	Compared to one year ago, how would you rate your health in general now today?	Ulibwino Kwambiri - Mbiri /Much better 1	Bwino Pan'gono /A Little better 2	Chimodzi - Modzi /About the same 3	Oipa Pan'gono /A Little worse 4	Oipa Kwambiri /Much worse 5
3	Kodi umoyo wanu ukutangwanitsani mu zinchinto? Monga..... Kuyenda mtunda wopitilila milosi imodzi	Does your health now limit you in these activities? If so, how much? Walking more than a km	Inde Kwambiri /Yes a lot 1	Inde Pan'gono /Yes little 2	Iyai /No, not at all 3		
4	Masabata asanu ndi cimodzi apitawa kodi mwakumana ndi mabvuto pa umoyo wanu? Kodi munacepesako nthawi yogwirira ntchito kapena zocita zina	During the past 6 weeks, have you had any of the following problems from your physical health? Cut down the amount of time you spent on work or other activities.	Inde /Yes 1	Iyai /No 2			
5	Masabata asanu ndi cimodzi apitawa, nimunjira yotani yomwe mabvuto ya umoyo wanu yatangwanitsa makhalidwe anu ndi a bwenzi anu.	During the past 6 weeks, to what extent has your physical health or emotional problems interfered with your normal social activities?	Ndi pang'ono ponse /Not at all 1	Pan'gonoko /Slightly 2	Nkhasako /Moderately 3	Pang'ono /Quite a bit 4	Ngako /Extremely 5
6	Masabata asanu ndi cimodzi apitawa, kupwanya kapena kupweteka kwa mthupi kunabweza ntchito ya nthawi ndi nthawi motani kodi? Zotuluka;palibe konse; Pang'ono cabe; pang'ono; pakuluko; kopotsa	During the past 6 weeks, how much did pain interfere with your normal work (work outside the home and housework)? Response categories: Not at all; A little bit; Moderately; Quite a bit; Extremely.	Palibe konse /Not at all 1	Pang'ono cabe /A little bit 2	Pang'ono /Moderately 3	Pakuluko /Quite a bit 4	Kopotsa /Extremely 5
7	Awa mafunso ndi okhuza momwe mumbvela muthupi ndimomwe zinali masabata asanu ndi cimodzi apitawa Kodi unali ndi mphambvu kwambiri?	These questions are about how you feel and how things have been with you during the past 6 weeks. Did you have a lot of energy?	Nthawi zonse /All of the time 1	Kambili-kambli /Most of the time 2	Mwakanthawi /A good bit of the time 3	Nthawi zina /Some of the time 4	Mwakathawi cabe /A little bit of the time 5
8	Masabata asanu ndi cimodzi apitawa, niutali otani yomwe mabvuto ya umoyo wanu yatangwanitsa makhalidwe anu ndi a bwenzi anu.	During the past 6 weeks, how much physical health / emotional prob. interfered with your social life	Thawi zonse /All of the time 1	Kambili-kambli /Most of the time 2	Thawi dzina /Some of the time 3	Mwakathawi cabe /A little of the time 4	Palibe /None of the time 5
9	Kwamasabata asanu ndi cimodzi apitawa kodi umoyo wanu wakhuzidwa motani ndi matenda awa....	During the past 6 weeks, how much physical health interfered due to following illnesses	Thawi zonse /All of the time 1	Kambili-kambli /Most of the time 2	Thawi dzina /Some of the time 3	Mwakathawi cabe /A little bit of the time 4	Palibe /None of the time 5
A	Mumimba motulula	Diarrhea	1	2	3	4	5
B	Kamwadzi	Dysentery	1	2	3	4	5
C	Chifuwa	Cough	1	2	3	4	5
D	Mumimba monyonga	Stomach Pain	1	2	3	4	5
e	Kumpwanya mnkhongono	Pain joints / feet	1	2	3	4	5
F	Malungo	Malaria	1	2	3	4	5



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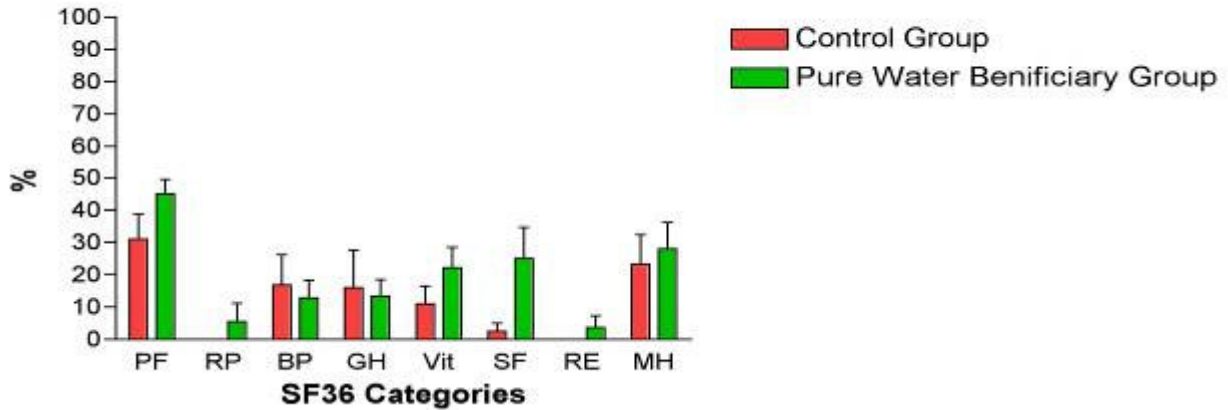
A3. SF-36 Health Status Response: HHDF Home Pure Water System Project

Q Nr	ALL Before	Control After	ALL Pure Water Beneficiaries After
1 (1-5)	4 - Fair	5 - Poor	1 - With HHDF Pure Water My Health is Excellent
	ALL Before	Control After	ALL Pure Water Beneficiaries After
2 (1-5)	4 - Worse	5 - Much Worse	1 - With HHDF Pure Water My Health is Much Better than last year
	ALL Before	Control After	ALL Pure Water Beneficiaries After
3 (1-3)	2 - Yes A little	2 - Yes A little	3 - With HHDF Pure Water I have had NO Limitations at all reg. Heavy Work
	ALL Before	Control After	ALL Pure Water Beneficiaries After
4 (1-2)	1 - Yes	1 - Yes	2 - With HHDF Pure Water I have had NO cut down in Time spent on Work due to physical problems
	ALL Before	Control After	ALL Pure Water Beneficiaries After
5 (1-5)	4 - Quite a bit	5 - Extremely	1 - With HHDF Pure Water I have had NO social limitations due to physical health or emotional problems
	ALL Before	Control After	ALL Pure Water Beneficiaries After
6 (1-5)	4 - Quite a bit	5 - Extremely	1 - With HHDF Pure Water I have had NO limitation due to pain
	ALL Before	Control After	ALL Pure Water Beneficiaries After
7 (1-6)	5 - Little of the time	6 - None of the time	1 - With HHDF Pure Water I have been Full of Energy ALL of the time
	ALL Before	Control After	ALL Pure Water Beneficiaries After
8 (1-5)	2 - Mostly True	2 - Mostly True	5 - With HHDF Pure Water I Definitely do NOT expect my Health to get worse
	ALL Before	Control After	ALL Pure Water Beneficiaries After
9a. (1-5)	2 - Mostly	1 - All of the time	5 -With HHDF Pure Water I have NOT had Diarrhea at ALL
	ALL Before	Control After	ALL Pure Water Beneficiaries After
10b. (1-5)	2 - Mostly	4 - A little	5 - With HHDF Pure Water I have NOT had Dysentery at ALL
	ALL Before	Control After	ALL Pure Water Beneficiaries After
10c. (1-5)	2 - Mostly	2 - Mostly	5 - With HHDF Pure Water I have NOT had Cough at ALL
	ALL Before	Control After	ALL Pure Water Beneficiaries After
10d. (1-5)	2 - Mostly	2 - Mostly	5 -With HHDF Pure Water I have NOT had Stomach Pain at ALL
	ALL Before	Control After	ALL Pure Water Beneficiaries After
10e. (1-5)	2 - Mostly	2 - Mostly	5 -With HHDF Pure Water I have NOT had pain in joints and feet at ALL
	ALL Before	Control After	ALL Pure Water Beneficiaries After
10f. (1-5)	2 - Mostly	2 - Mostly	5 - With HHDF Pure Water I have NOT had Malaria at ALL

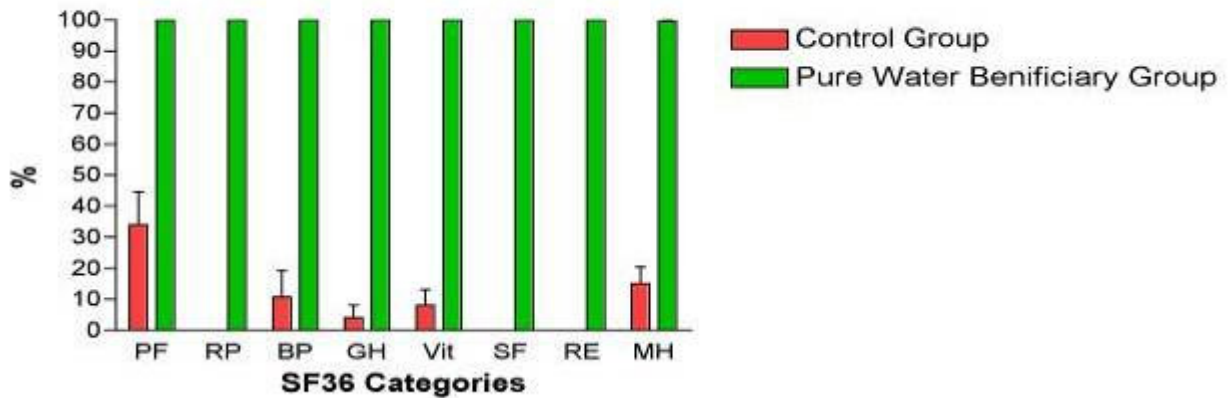


A4. HHDF Home Pure Water System Project Graphs and Significance of Results

Start



After Pure Water 6 Weeks Study



SF-36

PF = Physical Functioning

RP = Role-Physical

BP = Bodily Pain

GH = General Health

Vit = Vitality

SF = Social Functioning

RE = Role-Emotional

MH = Mental Health

0-100% where 100% is best



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A5. Water Bacteria Test 1, 2 and 3 - Chipata Municipal Council and UTH Lab

Chipata Municipal Council,
PO BOX 510020,
Chipata.

10th April,2007.

To: Mr. Daniel Jinnfalt
Program Manager
Human Health Development Foundation,
Box 510485,
Chipata

Dear Sir,

REF: WATER SAMPLES RESULTS

I collected water samples on 21st Feb,2007 from Luntembwa Dam 2 to test your water filter bucket under Chipata Municipal Council (Health Department) and below are the results.

Sample No	Bacteriological
1-Raw water	Positive
2-Filtered water	Negative

1. Bacteriology Analysis shows that the raw water is contaminated therefore it is not fit for Drinking.
2. Bacteriological Analysis shows that the filtered is free from contamination hence it is fit for Drinking.

However some water from a dam was collected and filter, the filtered water was sent to Lusaka for further testing .Below are the results of Bacteriological analysis

<u>Aerobic plate count</u> (CFU/ml)	<u>Feacal coliforms</u> (MPN/100ml)	<u>E. coil</u>
1. Less than 1×10	0	Absent

Complied by *Cynthia*
Cynthia Namantemba
Environmental Health Officer.



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Chipata Municipal Council,
PO BOX 510020,
Chipata.

18th April,2007.

To: Mr. Daniel Jinnfalt
Program Manager
Human Health Development Foundation,
Box 510485,
Chipata

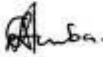
Dear Sir,

REF: WATER SAMPLES RESULTS

I collected water samples on 17th April, 2007 from Lutembwa stream in Dumisa village to test for bacteriological content in the water before and after it was filtered under Chipata Municipal Council (Health Department) and below are the results.

Sample No	Bacteriological
1-Raw water from the stream	Positive
2-Filtered water from the stream	Negative

1. Bacteriology Analysis shows that the raw water is contaminated therefore it is not fit for Drinking.
2. Bacteriological Analysis shows that the filtered is free from contamination hence it is fit for Drinking.

Complied by 
Cynthia Namantemba
Environmental Health Officer.