

Assessment of The Starfish Malaria Project
in
Gunjur, The Gambia.



Conducted by Naomi Campbell,
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Neil Griffiths, the Marlborough Brandt
Group and the Trust Agency for Rural
Development.

Introduction

In 2008, The Starfish Malaria Project funded by Neil Griffiths and The Marlborough Brandt Group (MBG) was launched as a result of the poor attendance at the pre-school in Gunjur, The Gambia. It was noted that the predominant reason for this low attendance rate was due to malaria which has a significant affect on children under five and pregnant women. Malaria is a serious problem in Africa, where one-in-every-five (20%) childhood deaths is due to the effects of malaria. On average an African child has between one and five episodes of malaria fever each year (WHO 2009). This has immediate affect on the health of children within Gunjur where approximately three thousand household members are less than five years of age (Derek Bailey Foundation 2008). Malaria is indeed a very serious disease that was and is affecting residents of the village of Gunjur in The Gambia.

Upon the realization of this evidence, Neil Griffiths and the Marlborough Brandt Group along with Trust Agency for Rural Development (TARUD) a Non Governmental Organisation (NGO) set up in Gunjur in 1997 by the Marlborough Brandt Group and the local community decided to implement Project Starfish. The name of the project is based on the story adapted from The Star Thrower by Loren Eiseley (1907-1977). The story describes a young boy throwing washed up starfish along a beach back in to the sea. After watching the young boy for some time, an elderly man approaches him and asks why bother saving one starfish when the beach is littered with hundreds. The young boy responds that although throwing one starfish among hundreds may not make a huge difference, it does make a difference to that individual starfish. This story is reiterated throughout the project's work, whereby it is hoped that it will make a small difference to a significant problem throughout Gunjur, the Gambia and indeed, the entire continent of Africa.

The main focus behind The Starfish Malaria Project is prevention of malaria from the outset. This includes the distribution of bed nets and the provision of education about malaria; including cleanliness and barrier methods within the home, for example wire mesh on windows. TARUD are in charge of the distribution of bed nets within Gunjur and the wider area. Distributions are conducted using either the company vehicle or TARUD staff's own personal motorbikes. Education about malaria is provided through talks given by TARUD staff during bed net distributions, as well as announcements on local radio, health sensitization days held in the local community and clean up days of particular areas where the abundance of mosquitoes is rife, such as dumping grounds.

Activities during 2008

2008 was the first year in which The Starfish Malaria Project took place in Gunjur, The Gambia. The project involved the TARUD health team, who were and still are responsible for this project. The health team consists of one health coordinator Muna and two health assistants: Ebrima J. Tamba and Fabrama. The health team are also involved in other projects within TARUD such as Stepping Stones, a consortium fighting AIDS/HIV and Violence Against Women, which involves the NGO Action Aid and is designed to reduce the incidence of HIV/AIDS and prevent violence against women in Gunjur.

Sensitization programmes during 2008

The launch of The Starfish Malaria Project took place on Monday 5th May 2008 and was attended by a vast number of people from the community. The occasion was marked with speeches, drumming and dancing, including singing by local group the Kanyellengs. The Kanyellengs are a group of women that are highly respected in the community and who sing songs about various issues concerned with community matters. In collaboration with TARUD's health staff the Kanyellengs sang songs about malaria, its dangers and methods of prevention.

Following this entertainment, a community sensitization programme was carried out at the Gunjur Health Centre. This was held on the ante- and post-natal clinic day, which caters for pregnant and nursing women, in order to target those most susceptible to malaria. A weeklong sensitization programme was then carried out in the central and mini markets in Gunjur, the Gunjur public car park, the Gunjur fishing area and other public areas surrounding Gunjur. These areas were chosen because they are common meeting places for women to buy food and socialize throughout the day. A public address system and placards were used throughout the programme in order to attract a large crowd.

During the last quarter of 2008, open discussions were held as well as home visits in order to inform the community about how the malaria parasite is transferred from the mosquito to the host through the mosquito bite. One of the recommendations at this point was the utilization of traditional communicators in order for the information concerning malaria to be spread through a well-established and well-respected medium within the community.

Bed net distribution and dipping during 2008

From July 15th to 18th, 2008 (at the start of the rainy season when the mosquito population is beginning to rise) TARUD distributed 550 treated bed nets in Gunjur. The distributions took place at four strategic locations; Yoroda Market, Fa Bai daa Market, Ba Jung daa Market and Central Market. The nets were given to pregnant women and children under five. Upon receiving a net, a mark was made on the recipient's clinic card in order to keep track of who had been given a bed net. TARUD also kept a record in which details from the clinic card were taken. A record of all these entries can be seen in the Excel spreadsheet in Appendix 4. This procedure can sometimes prove problematic as some clinic cards are missing important information such as a clinic card number, date of birth etc. Previous to this project, all entries were kept in two hardback copybooks in order to keep a record of recipients. Now, following the transference of written data on to an Excel spreadsheet, TARUD staff can update information digitally.

Upon receiving a bed net, strict information was provided to recipients about sleeping under bed nets at all times and not to store/collect nets or stay outdoors for hours before going to sleep under a bed net. Recipients were informed as to how to set up a bed net outside should they feel too hot under it indoors.

Bed net dipping occurred during July of this year for the members of Gunjur who had previously received a conventional bed net. These conventional nets have been previously dipped but could not be washed with bleach, soap powder, locally made soap or dried under the sun because the effect this has on the insecticide. It was therefore encouraged by the TARUD health team during distribution to bring the nets to this mass-dipping event.

At the event, all nets were dipped in KO tablet, which is a Deltamethrin-based tablet used to impregnate nets with an insecticide repellent. One KO tablet is needed for one liter of water and will impregnate two nets with insecticide. After dipping nets in KO tablets, nets can be washed and dried in the more traditional manners mentioned previously.

From November until December 2008, 400 treated bed nets were distributed in various locations around Gunjur, 334 nets to children under five and 66 to pregnant women. At this stage, the nets changed from the basic four-corner model to one that is a longer in length, round-topped model. This net is preferred to the four-corner net because it fits beds better due to its length and was revealed as more comfortable to sleep under by users.

Activities during 2009

Sensitization programmes during 2009

During 2009, a community sensitization radio programme was composed by TARUD at Gunjur Radio Station. This sensitization method was used in order to reach the wider community of Gunjur concerned with health issues, such as malaria. Members of the Gunjur Health Clinic and the Gunjur Village Development Committee (VDC) were also involved in the programme. The show itself consisted of a one-hour programme dedicated to members from TARUD, The Gunjur Health Clinic and the VDC speaking about malaria and its prevention in The Gambia, with particular reference to Gunjur. Members of the local community could then phone in and ask questions to the panel if desired.

A SET-SETAL (Gambian yearly cleaning method) general cleaning exercise was also carried out by TARUD during the year. This included the Alkalo (the Mayor of Gunjur), the Council of Elders, the Nyansimba (head of the Women's Organizations in Gunjur), representatives from the Kafoolu (women's social groups) and VDC representatives identifying dumping sites of environmental concern to the community of Gunjur. These dumping sites are prolific sites for breeding mosquitoes, as stagnant waters create moist, warm conditions for mosquitoes to breed and reproduce. Once the local community identified a suitable site, an assessment was carried out. This enabled the amount of pollution caused by the site to be assessed and implement best practices on pollution reduction. On the 1st June 2009, a major clean up of the site was administered, involving demonstrable voluntary participation from the community, the National Environmental Agency and the Brikama Council Area.

Following the success of the clean up program, target area sensitizations were held on the outskirts of Gunjur to inform people in a wider area of the problem of malaria in The Gambia. The TARUD health team explained how such areas, further away from health facilities are much more susceptible to malaria infection. However, the lack of funding meant that the health team could not always reach out to these areas.

TARUD also held a sensitization programme on an antenatal and infant clinic day in association with The Gunjur Health Centre. A series of talks were given concerning malaria and questions were then addressed to the audience. Prizes, such as kettles, buckets and other utensils were given out to people who gave correct answers to questions. Not only did this motivate participants to get involved but it also enabled them to learn valuable information concerning malaria.

Bed net distribution and dipping programmes during 2009

During 2009, 500 bed nets were dipped in a series of programmes within Gunjur and its surrounding environs. These bed nets were dipped in KO tablets and the dipping was performed in major meeting centers in Gunjur, similar to those mentioned in the 2008 bed net dipping exercise. During these bed net dipping exercises, counseling sessions were given to members of the community about malaria and associated prevention measures.

250 bed nets were distributed from October until December 2009. This again was performed in the main market centers within Gunjur and was focused on pregnant women and children under five.

Indoor house spraying against malaria of Kombo South District was conducted by TARUD in collaboration with the Department of Health and Malaria Control Unit. This involved a mass spraying exercise from house to house in the entire Kombo South District. It occurred from January 4th until January 15th 2010. This is a common practice carried out by The Gambian government each year.

Activities during 2010

During 2010, two main activities were carried out; production and distribution of bed nets and an impact assessment of Project Starfish from its birth in 2008 up until 2010. For the first half of the year, the health team in TARUD, principally conducted by Ebrima J. Tamba, carried out these activities. During the second half of the year, namely during the month of August, a full assessment of the project was done jointly by the author, Naomi Campbell and Ebrima J Tamba. A bed net distribution also occurred at this point, run by Naomi Campbell, Ebrima J Tamba, George Cooper (a volunteer with Marlborough Brandt Group) and Fabrama (TARUD).

Production and distribution of bed nets.

During the first half of 2010, bed net material was purchased from Serrekunda. Local tailors from Serrekunda were identified and contracted to sew 250 nets, helping generate income for all involved. These 250 nets were transported from Serrekunda to TARUD for distribution in the month of August, while the author, Naomi Campbell was working with the TARUD office. The nets were given out in the five following sites, Gunjur Medical Centre (40 nets), Gunjur Misera (35 nets), Gunjur Kulcochi (40 nets), Gunjur Kajabang (27 nets) and Gunjur Darsalam (30 nets). 20 nets were also given out to the Al khalo (Mayor of Gunjur) and the elders in the community at the request of the Al Khalo when he was visited to ask for permission to distribute the nets at the start of the assessment.

Project Starfish Questionnaire

Before the author's arrival in Gunjur, TARUD had begun part of the assessment by completing a number of questionnaires within the community on the 24th and 25th of April 2010. At this point 10 questionnaires within the local community and a report of findings were completed. This questionnaire identified a number of key factors important in the prevention of malaria in Gunjur, such as how many nets are present in the house and how many people sleep under them. Throughout the questionnaire it is highlighted to the community that the most important group of individuals to sleep under the nets are pregnant women and children under the age of five. A copy of the questionnaire can be seen in Appendix 1.

During the author's stay in Gunjur, a further 47 questionnaires were completed by the communities within and surrounding Gunjur. The author and Ebrima J Tamba conducted the questionnaires during trips visiting various groups within Gunjur and to the communities who received bed nets. Volunteers from MBG also conducted the questionnaire with their hosts during their stay in various parts of Gunjur. It is believed that if these questionnaires were to be completed again it would be preferable to conduct this after bed net distribution, as there are large group of people at that time who are concerned with the affects of malaria and are willing to help with Project Starfish. It also saves time in explaining what exactly the questionnaire is for. All questionnaires conducted were compiled in to a table, which can be seen in Appendix 2.

Meeting with Lamin Merong, Gunjur Medical Centre on 4th August 2010.

On the above date, the author met with Lamin Merong, head of The Gunjur Health Centre. He reported on the history of malaria within the area as well as discussing present approaches to the disease. The information below comes from this interview.

Two types of drugs are given to people suffering from malaria in Gunjur; Coartem and Quinine. Quinine was the first drug to be introduced in 1988 to cure malaria and is still being used now for pregnant women who contract malaria, as well as severe cases. Coartem was introduced during 2005 or 2006 and is used on the children under and over five and adults. The reason Coartem is not used on pregnant women is due to current lack of testing on the effects of the drug on the foetus. However, Lamin Merong believes that this may soon change as he has heard good reports of Coartem working well on women in other countries where testing has been performed. Previous to Coartem, Chloroquine was used. However, after its introduction, resistance to the drug occurred over a period of time. By 2008, Chloroquine was more or less ineffective due to increasing resistance to the drug, which in turn led to the reaction of The Gambian Government and The Global Fund to provide Coartem to the nation.

The blood test to assess if a patient has contracted malaria or not takes approximately fifteen minutes and is very accurate. Such tests are known as Rapid Detection Tests and consist of a drop of blood on a buffer, revealing the presence of malaria by two lines. Previous to 2008, all malaria test samples had to be sent to a laboratory in Brikama. This was inefficient as samples had to be sent to Brikama, analyzed and then returned to Gunjur. However, in 2008, a laboratory was developed at the Gunjur Health Centre and four members of staff were employed to operate it. Musa is the head of this laboratory and he conducts further testing on blood samples to assess the severity of the malaria. Such testing is conducted using a microscope and a series of stains. Musa also measures the Haemoglobin level within the sample to assess for anaemia. This results in every patient being tested for malaria and anaemia and after 15 minutes can be diagnosed and given prescribed medication. The severity of the case can also be monitored. Staff working in the health centre have all been trained in Malaria Case Management in 2008 to assess malaria in accordance with National Guidelines.

Up until 2010 the Gunjur Health Centre provided Long Lasting Nets (LLN's) to the community provided by the government. However, this year they were not given nets to give out. Lamin believes this may be due to the amount of nets that NGO's such as TARUD and others are providing in the community.

Lamin Merong believes that yes, malaria cases have definitely reduced in number since 2008. He feels that people's awareness has improved greatly due to the work done by the NGOs, such as TARUD and the government. Before 2008, all the beds in the Gunjur Health Centre would have been full with malaria patients, now; no beds are as necessary for these patients. He believes that the current strategies in place are working, as mortality rates from malaria are dropping.

The numbers of cases of malaria in the past three years were obtained from Gunjur Health Clinic. Previous to 2008, results were sent to Brikama and the clinic was unable to access these results for this assessment due to the lack of time and difficulty in locating them. Results from 2008 onwards, concerning malaria can be seen in Appendix 3. However, these results should be dealt with in the strictest of confidence as they are extremely important to the clinic.

It can be seen from the above text how improvements have been made in the clinic since 2008, such as the sample testing and the improvement in medication. However, these are all reactive measures to malaria as opposed to preventative measures offered by TARUD such as education concerning malaria and the use of bed nets.

Future goals of Project Starfish within TARUD.

In order to maintain and develop the Starfish Malaria programme, the author Naomi Campbell, Ebrima J. Tamba and Muna, drew up an activity plan for the future projection of the project. Costs were ranked according to priority within the project. For example the costs that rank the highest are in red, whereas a less important cost may be shown in green or blue.

Costs that are most important for the project include stationary, purchase and distribution of treated bed nets, sensitization programmes including radio announcements and staff wages. These costs allow the TARUD health team to continue the project at the current level as well as undertaking an impact assessment for the coming year. If these costs are not supplied, The Starfish Malaria Project cannot go ahead for the coming year.

Costs which rank second are in orange and are associated with activities The Starfish Malaria Project staff would like to undertake in order to prevent malaria breeding sites from occurring within Gunjur. The costs include educating the target groups surrounding Gunjur about malaria. Education in surrounding areas would consist of home visits and puppet shows, conducted by TARUD in conjunction with the Maternal and Child Health Clinics organized within the Gunjur Health Centre. This idea has been created out of an obvious demand for education on malaria from the communities that lie on the outskirts of Gunjur. These people are unable to receive all the benefits associated with living near to a large village like Gunjur and are therefore more in need.

Furthermore the renting of tractors in order to undertake major clean ups of various dumping sites within and surrounding Gunjur has been highlighted. This has been highly successful in previous years with a large number of people partaking from the local community.

The costs in green are concerned with the development and longevity of the project. They are sustainable investments in the project that will cut down costs in the long term and create a more efficient project. These costs include the purchase of sanitary equipment for the major clean up, repair of the second TARUD vehicle and purchase of a lap top computer, digital camera and printer. The purchase of the sanitary equipment is for the major clean up of dumping sites, which are prime malaria breeding sites in the village of Gunjur. These tools can be used frequently by The Starfish Malaria Project staff for future clean ups. TARUD has two vehicles, one, which is up, and running, another that is out the back of the centre unused. The one vehicle that is used by TARUD is for every staff member and must be booked in advance. This cause's great friction as it means no two projects can use the vehicle on the same day. Manlafi, an

experienced mechanic now working within TARUD investigated repairs needed in order to get the vehicle up and running. It was discovered that it would be more cost effective to repair the current vehicle than to buy a new one.

The purchase of a laptop is principally for Ebrima J. Tamba who is Project Starfish's main staff member. Ebrima has no computer to work with at the moment as the laptop supplied by MBG has malfunctioned. Another option for this would be to bring one over from the UK at some stage. This is crucial to the project; otherwise Ebrima has no manner of electronic communication with MBG. The provision of a digital camera is for the Project Starfish staff members to document their activity to MBG, such as the major clean up or puppet shows in the various communities. A printer has also been requested on behalf of the project, as there is only one printer within TARUD that is in constant use by other members of staff. A second printer would greatly aid this project.

The last set of costs are in blue and are associated fuel costs to various activities held by TARUD staff involved in Project Starfish.

Conclusions

The three main areas that were of importance for the Project Starfish Impact Assessment were as follows; the community questionnaire, The Gunjur Health Centre's health records and the TARUD health records. The questionnaire was created by Ebrima J. Tamba and was conducted by the author Naomi Campbell and the MBG volunteers in order to get a broader knowledge of education levels concerning malaria within Gunjur. As mentioned previously, a copy of this questionnaire can be seen in Appendix 1 and a spreadsheet of all questionnaires can be seen in Appendix 2.

What is noticeable from the questionnaire is the abundance of knowledge present within Gunjur about malaria and its methods of prevention. The majority of respondents felt that bed nets were the best form of prevention of malaria and had received them from free distribution. This demonstrates how important the free distributions are.

The cleaning regime of SET SETAL is of great importance to the community of Gunjur. This regime demonstrates how your home environment can serve as a breeding ground for mosquitoes and methods to prevent this from happening. However, it was felt that the most important point raised by this questionnaire is the prevalence of malaria cases within the past three years. A very high proportion of people had experienced malaria themselves or within their families during this time within Gunjur despite preventative methods in place.

A study of the records of malaria from the Gunjur Health Centre shown in Appendix 3, demonstrate how levels of malaria have dropped from 2008 to 2009. It is believed this is due to a number of important interventions regarding the prevention and medication of malaria since 2008. The advent of Coartem within the clinic is one such intervention, with many clinicians praising its efficacy. It is also due to the improvement within the Health Centre itself; a new laboratory, increase in staff numbers and new equipment to identify malaria rapidly. It can be seen that the rainy seasons (July, August, and September) have the highest number of malaria cases due to the prevalence of mosquitoes at this time. It is important to spread awareness that even though mosquitoes are more prevalent at this time, sleeping under a bed net should occur all year round.

The methods within the Gunjur Health Centre are designed to cure malaria. However, medication does not cause a drop in actual cases contracting malaria. That is due to the provision of bed nets by TARUD in the community. This is now more important than ever, as Gunjur Health Centre will no longer be distributing bed nets.

The records compiled by the Project Starfish staff of TARUD demonstrate how much work has been done on this project and how many people have been affected (156 pregnant women, 1018 children under 5). It is hoped that once this project is handed over to the staff members of TARUD, they can continue using the Excel spreadsheet to gather their records together.

Thanks

I would like to thank the following people for their help with this project; George Cooper, who helped in the Gunjur Health Centre and with the distributions; Nick Maurice, whose knowledge in this area is vast; Neil Griffiths, without whom the project would never have occurred; Joyce and Chris White, who were of great support both pre and post-Gambia; Anita Bew, who offered great advice before the trip; all the MBG volunteers who helped out with questionnaires in The Gambia; Emmett Craig, who was of great support to me with this project, my entire family who helped with fundraising to go to The Gambia in the first place and last but not at all least, the staff members of the Gunjur Health Centre, namely Lamin Merong and Fatou Faye, the Gunjur Link Committee and the TARUD health staff without whom this project would never have been possible.

Most importantly I would like to thank Muna, Fabrama and Jingel for their immense amount of help with this project. Jingel especially taught me so much about the project and its background in such a short amount of time. I believe the work done by TARUD with this project reflects their hard work and dedication over the past two years.

I would also like to thank my host Fatou Manjang and her family. Their support throughout the month I stayed in Gunjur is unrivalled by any other.

Thank you.

Naomi Campbell

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