Wartime children's suffering and quests for therapy in northern Uganda

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Chapter Four

Survey data from assessment of common illness experiences and quests for therapy

This chapter presents the results obtained from a survey of children of primary school age. In the subsequent chapters, the quantitative data provided below will be analysed according to the separate illness categorisations.

4.1. General characteristics of children who participated in this study

Quantitative data were collected in a survey using semi-structured questionnaires from 165 children, aged between nine and sixteen years. At the time of the study they were attending displaced primary schools within Gulu Municipality and spent nights in night commuters' shelters.

Table 4.1: Study sample characteristics (N=165)

Variable	Sample size		Age		Education	
Gender	Number (Percent)	CI at 95%	Age	CI at 95%	Number of years	CI at 95%
Boys	88 (53.3)	1.39-1.54	13.4	13.11-13.73	6.27	6.05-6.49
Girls	77 (46.7)		13.4	13.02-13.93	6.28	6.04-6.53

4.2. Prevalence of children's illness experiences

One of the questions posed to children was: What illness experiences or health problems affected you in the recent past, for example in the past month? The multiple responses obtained are presented in Table 4.2 below.

Table 4.2: Illness experiences or health complaints within a one month recall (N=165)

Illnesses	Boys	Girls	Total	P-values
Aona ki avuru (cough and flu)	76	68	144	0.71
Gwinyo (scabies)	83	33	116	< 0.005
Tyena lit / wang vu (wounds and injuries)	38	57	95	< 0.005
Amwoda ici (stomach ache)	22	61	83	< 0.005
Cado (diarrhoea)	40	35	75	1.00
Cado pii pii (diarhoea with watery stools)	32	30	62	0.73
Lyeto (fever)	35	24	59	0.25
Malaria	20	21	41	0.50
Lit wang (red eye)	15	23	38	0.05
Trachoma (for those who went to health centres)	17	12	29	0.53
Koyo (coldness)	13	12	25	0.88
Abaa wic (headache)	11	14	25	0.31
Twol okayan (snakebites)	17	2	19	0.001
Cado marac / remo (diarrhoea with blood)	09	04	13	0.23
Malaria madongo (severe malaria)	5	3	8	0.59
Two cimu (epilepsy)	1	1	2	0.35
Total	**434**	**400**	**834**	

Table 4.2 above shows that there were sixteen types of different illness experiences or health complaints mentioned by the children who participated in this study, while the total number of responses was 834 (D=834). There were a high number of responses because the survey question was open ended and therefore yielded multiple responses. In essence, what can be gathered from this data is that there was a high disease burden for these wartime children. For gender disaggregated data, the total count for illnesses (d) mentioned by boys was slightly higher than those for girls; boys mentioned 434 counts of illness experiences (d=434) compared to girls' 400 counts (d=400).

Pearson's chi-square test was performed in order to establish whether there is a relationship between the observed data and expected data. For example, one of this study's sub-questions is whether boys and girls experience illnesses differently, and if so, why. Data obtained from the survey (observed data) could suggest that there is (1) no significant relationship, (2) a significant relationship, or (3) a strong significant relationship, between boys' and girls' illness experiences. In analyses with Pearson's chi-square tests, the larger the difference and consequently the larger the value for chi-square, the less likely it is that the two variables are unrelated or independent, in which case I deduce that there is no statistically significant relationship between the two variables under examination. However, there is always a possibility that even if the observed data are very different from expected data, that could have occurred by chance. It is this chance that is reported as the significance value – that is the P-value (see Fielding and Gilbert 2002:265). In short, it was deduced that two variables have a statistically significant relationship if the P-value, is smaller than or not exceeding the reference limit of 0.05. For example, we can deduce that there is a statistically significant difference for P-values less than or equal to the reference point of 5 percent or 0.05, (i.e. P-value < or = 0.05). Looking at the P-values column above, the P-value for boys and girls' experience with wounds and injuries within a one month recall is P<0.005, therefore the deduction would be that there is a strong statistically significant difference between girls and boys' reporting of experiences with wounds and injuries. This strong statistically significant difference is also observed for boys' and girls' experiences with scabies (P<0.005), stomach aches (P<0.005) and snake bites (P=0.001). The P-values (P<0.005) signify that the values are very small ranging from (0.0001 to 0.001). It is however advisable that such small values are only represented as (P<0.005) if the reference point for P-value is 5 per cent. There is also a statistically significant difference in boys' and girls' experiences with red eye disease (P=0.05). The value (P=0.05) for red eye disease falls on the upper limit of significance of five per cent. The deduction here is that the statistical difference between boys' and girls' experience with red eye disease is not a strong one. Data suggests, however, that there is no statistically significant difference in boys' and girls' experiences with the remaining illnesses.

Table 4.3: Coding of illness experiences (or health complaints) within a one month recall (N=165)

Illness	Boys	Girls	Total	P-values
Lyeto (fever)	35	24	59	0.25
Malaria	20	21	41	0.50
Koyo (coldness)	13	12	25	0.88
Abaa wic (headache)	11	14	25	0.31
Malaria madongo	5	3	8	0.59
Malaria	**84**	**74**	**158**	**0.84**
Cado pii pii (watery stools)	32	22	54	0.73
Cado (diarrhoea)	40	35	75	1.00
Cado remo (diarrhoea with blood)	09	4	13	0.23
Diarrhoea	**81**	**61**	**150**	**0.59**
***Aona ki avuru* (cough and flu)**	**76**	**68**	**144**	**0.71**
***Gwinyo/* scabies**	**83**	**33**	**116**	**<0.005**
Wounds	**38**	**57**	**95**	**<0.005**
Trachoma	17	12	29	0.53
Lit wang (red eye)	15	23	38	0.05
Eye infections	**32**	**35**	**67**	**0.24**
***Amwoda ici* (stomach ache)**	**22**	**61**	**83**	**<0.005**
Two cimu (epilepsy)	1	1	2	0.35
Twol okayan (snake bites)	17	2	19	0.001
Others	**18**	**3**	**21**	**0.001**
Total	**434**	**400**	**834**	

As shown in Table 4.3 above, various symptoms were categorised together to ensure data manageability. The criteria chosen for re-grouping or categorising the various complaints were either similarities in symptoms, low prevalence of conditions, or the type of medication sick persons were likely to access and use for the health complaints. For example, *abaa wic, lyeto,* and *koyo* – in addition to malaria and *malaria madongo* – were usually diagnosed by the various involved parties as malaria, and were subsequently treated as such (see the results of the qualitative study in Chapter Five). In addition,

when children inquired into what medicines to buy for these three illnesses – as well as for malaria and *malaria madongo* – in drugs shops, clinics, and grocery shops where medicines were sold, they were advised to purchase antimalarials. What is more, in health centres where participant observation was conducted, these five complaints, when made by the children, were diagnosed as malaria. I therefore coded the five symptoms together as malaria. Another example is the three different categories of diarrhoea which children discussed – *cado* (diarrhoea)*, cado pii pii* (watery stools)*,* and *cado remo* (bloody diarrhoea) – which were coded as diarrhoea and addressed in greater detail in Chapter Six mainly due to similarities in symptomatic presentation though with variations in severity.

Trachoma and *lit wang,* were health complaints which affected the eyes and they were together coded as eye infections, and in 'others' I combine the illnesses which few children (less than 20) mentioned to have experienced in a one month recall. That is how I categorise epilepsy and snake bites together.

Table 4.4: Illnesses as ultimately coded (N=165)

Illnesses	**Boys**	**Girls**	**Total**	**Percentage of responses**	**P-values**
Malaria	84	74	158	19	0.84
Diarrhoea	81	69	150	18	0.59
Cough and flu	76	68	144	17.1	0.71
Scabies	83	33	116	14	<0.005
Wounds and injuries	38	57	95	11.4	<0.005
Stomach ache	22	61	83	10	<0.005
Eye infections	32	35	67	8	0.24
Others	18	3	21	2.5	0.001
Total	**483**	**400**	**834**	**100**	

In Table 4.4 above, it is evident that malaria had the highest count: 158 of the 165 children either received malaria diagnoses – through self- or clinical-diagnosis – or used antimalarials in treatment of symptoms, within a one month recall. In short, children were most likely to mention that they had an experience self-diagnosed or clinically-diagnosed as malaria within a one month recall. In comparison to the entire summation of illness experiences, the prevalence of health complaints related to or diagnosed as malaria had

the highest percentage response of 19.0% (158 out of 834). Further, both boys' and girls' responses suggest equally high prevalence, with 84 boys (19.4%) and 74 girls (18.5%). There was no statistically significant difference between boys' and girls' self-reported and clinically-diagnosed experiences of malaria (P=0.84).

4.3. How children knew they were ill

In order to understand the children's health complaints for the above illness experiences within a one month recall, they were asked how they felt during these episodes. The summary of results is presented in Table 4.5 below.

Table 4.5: Symptoms of illnesses within a one month recall (N=165)

Symptoms	Boys	Girls	Total	P-values
Abaa wic (headache)	63	65	128	0.05
Koyo (coldness)	34	51	85	<0.005
Kuma leb leb (weakness)	48	35	83	0.24
Lyeto (high body temperature)	41	40	81	0.49
Abaa wic lela (persistent / severe headache)	36	35	71	0.56
Pe mito cam (appetite loss)	28	28	56	0.54
Ngok (vomiting)	27	26	53	0.67
Kuma rem (pain in the body)	17	11	28	0.39
Skin rashes	12	12	24	0.72

The symptom most highly ranked by the children was headache. Data also suggests a statistically significant difference in boys' and girls' experiences with headache (P=0.05). Nevertheless, the statistical relationship is not a strong one as the P-value obtained lies at the upper limit of statistical significance of 5 percent (i.e. P =0.05). Because there were more girls (bearing in mind that girls were fewer, n=77) who shared their experiences with headache, I can deduce that results possibly suggest that girls were more likely than boys to share their experiences with headache. The second most commonly mentioned symptom was *koyo* (coldness), with a strong statistically significant difference at P<0.005. Since about twice as many girls than boys reported having had *koyo* within a one month recall, it is probable that girls were more likely to complain of *koyo* than boys. Data suggest no

statistically significant difference for other symptoms. An issue of great importance in Table 4.5 are the symptoms of persistent headaches and pain in the body. These I discuss in Chapter Eleven, addressing complaints symptomatic of emotional suffering.

4.4. Medicines used in the management of common health complaints

Children were asked to name all medicines they had used in the recent past, for instance in the past month. The question about medicine use was open ended, again allowing for multiple responses. The results are presented in Table 4.6 below.

Table 4.6: Medicines commonly used by children (N=165)

Medicines (*Yat mwono* as opposed to *yat acholi*, i.e. medicines which are not herbal remedies)	**Boys**	**Girls**	**Total**	**P-values**
Red and yellow capsule	53	60	113	0.03
Black and red capsule	24	12	36	0.07
Amox (as called in drug shops)	10	4	14	0.23
Amoxicillin or Tetracycline	**87**	**76**	**163**	**0.92**
Yat matar ma tye 500 ma wac (white medicine with 500 and tasteless), or Panadol (500mg)	85	71	156	0.22
Chloroquine (white medicine which is bitter for malaria)	78	71	149	0.44
Opele (ointments for scabies)	64	64	128	0.11
Pen V (Penicillin V or phenoxymethylpenicillin)	62	64	126	0.06
Flagyl (yellow tablets for diarrhoea)	55	53	108	0.39
Multivitamins (or vitamins)	55	49	104	0.88
Eyedrops	55	43	98	0.39
Piriton (*yat nino matar*)	53	42	95	0.46
Action	43	46	89	0.18
Vemox (*yat kwidi* – deworming medicines)	41	39	80	0.60
Valium (*yat nino makwar*)	50	29	79	0.01
Lagarctil (the medicine for vomiting – this medicine was identified in drug shops and in two medical records I observed)	36	40	76	0.16
Fansidar	32	23	55	0.38
Septrin	21	22	43	0.49
Quinine (*yat labira ma lyeto ki malaria ma-dongo* – injections for *lyeto* (fever) and severe malaria)	16	6	22	0.05
Total	**833**	**738**	**1571**	

The 165 children named using a total of 1,571 medicines (D=1,571) over the past month. Boys (n= 88) named 833 (d=833) medicines in total, and girls (n=77) a total count of 738 (d=738) medicines. Such a finding suggests that there was a high level of medicine use by the study population. This finding is in line with high rates of medicine use by populations with a high disease burden. I will come back to this issue, and also make a connection between high medicine use and the presence of a wide range of pharmaceuticals in the market with the same active ingredients, but which were frequently used by children concurrently.

I recognise the difficulties encountered when discussing pharmaceutical properties based on their colours, principally because pharmaceutical companies often use different colours when packaging the same active ingredients into a capsule or tablet. During the period of research, the red and yellow capsules were most commonly Amoxicillin. Tetracycline did, however, sometimes come in red and yellow capsules. And although both Amoxicillin and Tetracycline are antibiotics, Tetracycline is well known for its broad spectrum effects (acting on more bacteria types, for example *Escherichia coli*, *Salmonella*, and *Vibrio cholerae*), while Amoxicillin has moderate spectrum properties.

The general statistics above suggest that there are medicines which girls were more likely to use than were boys. These mainly included analgesics and antibiotics such as the red and yellow capsules (n=60 : 8.1% : P=0.03), Action (n=46 : 6.2% : P=0.18), Largactil (n=40 : 5.4% : P=0.16), and Pen V (n=64 : 8.8% : P=0.06). There is a statistically significant difference between boys' and girls' use of the red and yellow capsules (P=0.03). The red and yellow capsules were also frequently recommended in drug shops for clients with stomach aches, and findings indeed suggest a higher prevalence of stomach aches in girls (n=61 : 15.3%) compared to boys (n=22 : 5.5%), at a P-value of <0.005. This issue will be addressed in detail in Chapter Eleven. Other areas where I discerned statistically significant differences in medicine use by boys and girls are in the use of Valium, with boys having higher reported usage (n=50) than girls (n=29), with a P-value of 0.01; and

in self-reported use of quinine within a one-month recall (P=0.05). I however will deduce that the difference in boys' and girls' use of quinine is not a strong one, for the value of (P=0.05) falls at the upper limit of significance of five per cent. I will return to this in analyses. From the wide range of medicines which children mentioned using within a one month recall, it was possible to categorise them according to likely active ingredients, and by the illness which the children were likely to have purchased them for. The different kinds of medicines used are shown in Table 4.7 below.

Table 4.7: Coding of medicines used by children within a one month recall (N=165)

Medicines	**Boys**	**Girls**	**Total**	**P-values**
Amoxicillin	53	60	113	0.03
Tetracycline	24	12	36	0.07
Amox (as called in drug shops)	10	4	14	0.23
Flagyl (metronidazole)	55	53	108	0.39
Pen V (penicillin V)	62	64	126	0.06
Septrin (cotrimaxazole)	21	22	43	0.49
Antibiotics	**225**	**215**	**440**	
Panadol (paracetamol)	85	71	156	0.22
Action (paracetamol/acetylsalicylic acid/caffeine)	43	46	89	0.18
Antipyretics	**128**	**117**	**245**	
Mabendazole (vemox)	**41**	**39**	**80**	**0.60**
Lagarctil (chlorpromazine)	36	40	76	0.16
Valium (diazepam)	50	29	79	0.01
Piriton (chlorpheniramine)	53	42	95	0.46
Psychopharmaceuticals	**139**	**111**	**250**	
Chloroquine	78	71	149	0.44
Fansidar (sulfadoxin/pyrimethamine)	32	23	55	0.38
Quinine	16	6	22	0.05
Antimalarials	**126**	**100**	**226**	
Opele (ointments for scabies)	**64**	**64**	**128**	**0.11**
Multivitamins (or vitamins)	**55**	**49**	**104**	**0.88**
Eyedrops (gentamycin)	**55**	**43**	**98**	**0.39**

In general, the data in Table 4.7 shows that children were seven times more likely to mention having used Panadol than the least used medicine quinine. This could be due to the easy accessibility and oral administration of Panadol as opposed to the special intramusculine and intravenous administration of quinine in hospitals and in some clinics. In addition, children indicated that they used Panadol for various health complaints as opposed to using quinine for malaria. For example, Panadol was used for self-diagnosed malaria, aches and pains and children applied crushed tablets of Panadol on wounds to minimise pain. A further observation is that although Piriton is known in biomedicine for its properties to counter the allergic effects of histamine released during an attack of flu or allergies, with its sleep causing effect considered to be only a side effect, children frequently put emphasis on this side effect of Piriton. This study will therefore discuss Piriton as a *yat nino* (sleep medicine) as opposed to its intended purpose of minimising allergic effects.

Table 4.8: Medicines used by children as ultimately coded (N=165)

Medicines	Boys	Girls	Total	Percentage of responses (%)
Antibiotics	225	215	440	28.0
Psychopharmaceuticals	139	111	250	16.0
Antipyretics	128	117	245	15.6
Antimalarials	126	100	226	14.4
Opele (ointments for scabies)	64	64	128	8.1
Multivitamins (or vitamins)	55	49	104	6.6
Eyedrops (gentamycin)	55	43	98	6.2
Mabendazole (vemox)	41	39	80	5.1
Total	833	738	1571	100

From Table 4.8, which must be viewed as second level categorisation of medicines by their active ingredients, it is clear that antibiotics were the most commonly used pharmaceuticals at 28.0%. This phenomenon could signify a presence of various types of antibiotics which children could access and a high prevalence of illnesses which necessitated administration of antibiotics. However, the high rate of antibiotic use might also suggest the unnecessary and over-use of such medicines. Psychopharmaceuticals, at 16.0%, were the second most frequently used medicines. This is not a particularly

uncommon finding for a population which had to confront war related emotional suffering, and which had found treatment largely through the use of pharmaceuticals. What is more, in institutions put in place to ensure children's wellbeing, such as night commuters' shelters, there was regular distribution of such pharmaceuticals as Valium and Piriton. Further in this thesis I will show how children managed complaints like sleeplessness through the use of pharmaceuticals commonly called *yat nino* (medicines for sleep). This practice had implications for the issue of comprehensive management of emotional distress. Meanwhile, antipyretics (15.6%) were the third most used medicines by children. This could be due to children's use of Panadol, for instance, as part of a combination of therapies for episodes of self-diagnosed malaria. Antipyretics were also used to minimise aches and pains, which could be seen to demonstrate children's medicalisation of complaints symptomatic of emotional distress. I will pursue this insight further in Chapter Eleven, allowing for an interpretation which sees the possibility that such symptomatic management of emotional suffering or distress reflects some of the curative approaches children employed to minimise their suffering, given the context in which they lived.

Antimalarials (14.4%), like psychopharmaceuticals, were also commonly used by children. I have explained above how a wide range of health complaints were diagnosed as malaria, and for which antimalarials were subsequently administered; this suggests one reason accounting for the high use of antimalarials by children within a one month recall. A second reason could be the easy access of antimalarials, and the fact that children minimised their health complaints mainly through the use of pharmaceuticals which could be easily accessed over the counter, without prior consultation with professional healthcare providers. It also appears that children had great trust in pharmaceuticals, particularly as they provide an immediate solution for minimising their suffering.

The points below represent additional factors which likely influenced the results obtained concerning medicine use by war affected displaced children.

* The timing of the questionnaire coincided with scabies and eye infection epidemics in the study region. Having been confronted by these epidemics, particularly scabies, children indicated having used various medicines in attempts to minimise their suffering – sometimes even using antimalarials on their skin rashes caused by scabies.

* At night commuters' shelters such as Noah's Ark and Lacor Hospital night commuters' shelter analgesics, psychopharmaceuticals and sometimes chloroquine were administered on a daily basis to children who presented health complaints such as headaches and pains in the body to nurses.

* The Gulu District Directorate of Health Services (DDHS) implemented school health programmes in October 2004 whereby children who attended displaced primary schools were given free de-worming medicines (Vemox) and multivitamins. During the same school visits by DDHS staff, girls of reproductive age (from twelve years of age) were vaccinated against tetanus.

Children described the medicines coded above by colour, taste, or specific names. Where specific names of medicines were mentioned, they were likely to be pharmaceuticals prescribed from health centres, market drugs (which always have the names clearly written on them), or medicines most frequently accessed and used by the children. For example, Panadol had the number 500 – indicating the dose in milligrams per tablet – clearly written on the packaging, and this number was therefore frequently evoked when speaking of the medicine. Its being *wac* (tasteless) was also used as a description for it. A substantial proportion of children also knew the name of Panadol.

I compiled a list of medicines as described by colour or taste, and indicated how the children used them. I then discussed the list with drug shop owners and three pharmacists in order to verify the likely active ingredients in these medicines. At first, categorising medicines by colour and taste – as the children had discussed them – presented a problem for me since different pharmaceutical companies used different colours for the same medicines. Therefore I had to choose the names which the colours and medicines were likely to represent. In order to gain insights into the sources of the medicines named above, children were asked where they obtained the medicines which they had recently used (see Table 4.9 below).

Table 4.9: Sources of medicines used by children (N=165)

Source of medicines	Boys	Girls	Total	P-values
Drug shops	56	36	92	0.03
Clinics	31	47	87	0.001
Hospital	37	28	65	0.46
Forest	23	15	38	0.31
Bush and near home	18	16	34	0.96

Results suggest that children mainly accessed medicines from drug shops. In Gulu Municipality drug shops were of varying quality at the time of this study. There were drug shops which were managed by pharmacists and there were those which were owned by people with no qualification at all in pharmacy. They dispensed medicines according to what the clients demanded and could afford. In the discussion of medical pluralism in Chapter Two, I provided the example of how it was common for clients at state aided health centres to be referred elsewhere for medicines, and for clients to receive prescriptions and be referred to drug shops and clinics to buy the medicines. This could also explain why more children mentioned having accessed their medicines from drug shops.

It is observable from the table above that there is a statistically significant difference between girls' and boys' accessing of medicines in drug shops (P=0.03) and from clinics (P=0.001). The figures suggest that boys were about twice as likely to access medicines from drug shops than girls, while a slightly higher number of girls than boys – forty-seven compared with thirty-one respectively – mentioned having accessed medicines from clinics. However, for the children there were actually no clear boundaries concerning what a clinic or drug shop was, and the differences adults gave during interviews were also blurred. One child who attempted to make a distinction between a clinic and drug shop only suggested one difference, namely that injections were administered at the clinic and not at the drug shops. In another example, at Olailong trading centre there were two medicine outlets managed by retired nurses. One was called Merrywood Clinic, the other Olailong drug shop, and the two centres offered essentially similar services to clients. Up to the time of writing this thesis the distinction between clinic and drug shop is still unclear to me, given the actual practices observed at the time of the study, and from regular visits to Gulu after fieldwork was completed. It was common to visit a clinic and find an individual who had no qualification at all in a biomedical discipline or pharmacy

dispensing medicines and also advising clients on what medicines they could buy for their health complaints. Further, retired nurses and clinical officers often owned either clinics or drug shops. If a basic distinction between the two states that at clinics clients may be given prescriptions and medicines by a professional health worker, while in drug shops clients only access medicines after presenting prescriptions, then this distinction is blurred for Gulu. I will therefore discuss children's perspectives concerning sources of medicines, bearing in mind the blurred boundaries between theoretical categories and preferences in nomenclature for the various sources of medicines.

In general the word *ot yat* – literally meaning 'house of medicine', but with reference to a hospital or health centre – was commonly evoked as a source of medicine during informal conversations. At this stage the children also referred to clinics or drug shops as *ot yat*, and ultimately the distinction could only be made when the child was asked more questions concerning whether s/he had bought the medicines or accessed them free of charge. As mentioned earlier, all clients of the state aided health centres of Gulu Regional Referral Hospital, Layibi, Laroo, and Laliya accessed medicines free of charge, therefore when a child indicated having bought the medicines it was likely that the child had visited a drug shop or clinic.

Returning to the results in Table 4.9, they suggest that there is no statistically significant difference between boys' and girls' accessing of medicines from hospitals (P=0.46), the forest (P=0.31), or the bush near their home (P=0.96). It is probable that both boys and girls accessed medicines from these three sources equally. In the context of medical pluralism, children often used herbal remedies to manage common illnesses which affected them. Some of the remedies captured in the survey are presented below.

4.5. Herbal medicines used by children

From the various sources of medicines which children named in Table 4.9, it is evident that some of the medicines were herbal remedies. In Table 4.10 below, I provide a summary of the different herbal medicines which the children mentioned having used within a one month recall. A list of herbal medicines, including those which children brought to the workshop on commonly used herbal medicines, were presented to the department of Botany at Makerere University for identification. A complete list of scientific names of the identified species is provided in Appendix Eight.

Table 4.10: Herbal medicines used by children within a one month recall (N=165)

Herbal medicines	Boys	Girls	Total	P-values
Mango roots	79	69	148	0.97
Pawpaw leaves	82	59	141	0.003
Mango bark	75	51	126	0.004
Garlic	34	39	73	0.12
Banana sap	29	19	48	0.24
Neem leaves	24	11	35	0.042
Guava leaves/bark	20	4	24	0.001
Total	**343**	**252**	**595**	

In general, children mentioned using about three times the number of pharmaceuticals (1,571) than herbal remedies (595) in the management of common illnesses within a one month recall. This could be due to the fact that pharmaceuticals were easily accessible and children regarded them as efficacious. It is also possible that children had greater trust in pharmaceuticals compared to herbal medicines.

Through gender disaggregation of the data I discovered strong statistically significant differences between boys' and girls' uses of pawpaw leaves (P=0.003), mango bark (P=0.004) and guava leaves or bark (P=0.001). A slight statistical relationship was obtained in girls' and boys' use of neem leaves (P=0.042). Further, boys in general were more likely to mention using herbal remedies (d=343) compared with girls (d=252), therefore this finding may suggest that boys used more herbal remedies than girls.

The figures for mango bark and mango roots remain separate because children were very particular about the distinct importance of the two parts of the same plant. Even pictorially it was common for children to draw both the mango tree stem/bark and the mango roots. For example, twelve year old Okello, after drawing the mango tree, indicated that the roots are for whooping cough and the bark for stomach ache. Nine year old Abwo also drew two mango trees, and shaded one of the trees at the roots, making an indication for 'abdomen pain' (stomach ache) and the other at the bark, writing 'for cough'. Meanwhile twelve year old Apio, after drawing the mango tree, wrote 'mango tree root for diarrhoea'. A similar drawing was done by twelve year old Acen and eleven year old Aol, who showed in one illustration a girl digging out the mango tree roots and wrote 'for diarrhoea', while in another illustration she showed a girl getting part of the mango bark, with a caption 'for cough'. During one group discussion at Noah's Ark night

commuters' shelter, children suggested that each part of the mango tree had different medicinal purposes and indicated using *kor muyeme me aona* (mango bark for cough) and *tee muyeme me cado* (mango roots for diarrhoea).

There were, in general, overlaps in the use of different medicines for common illnesses which affected children. In each of the subsequent chapters an attempt is made to link the various medicines with individual illness experiences. This exercise is guided by qualitative data since in some instances it was quite difficult to tell from the quantitative survey what the child used the medicine for within their one month recall; in particular when the child also indicated having had multiple illness episodes. Further, in the course of presenting and discussing various diseases, more medicines will be introduced. These are medicines or remedies which children discussed only when qualitative data collection methods were used.

In summary, Chapter Four has acted as a general introduction in which mainly survey data about children's illness experiences and quests for therapy were presented. In subsequent chapters the findings are extracted from the overview of results and analysed separately.