Report 2018: Health education in local schools of the Upper Arun Valley regarding hand washing, oral hygiene and ear and hearing health.

Sandra Eisner

Content

This document contains information about activities carried out in the Upper Arun Valley of Sankhuwasabha District (Nepal) in 2018 regarding health education (hand washing, oral hygiene, ear and hearing care) in local schools.

The programs were organized and conducted by Dorchi Nuppa Bhote and Sandra Eisner and supported by Kija Ridar Bhote and Migma Bhote. The programs are furthermore in co-operation with “Hilfe die ankommt” (Austria), the “Nepal Lhomi Society” (Nepal) and financially supported by many kind people in Austria and Germany.

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About the program organizers

Sandra Eisner is an Audiologist and Speech and Language Therapist from Austria. Since 2015 she has been working in Nepal. From 2015 to December 2017 she supported the Audiology Department at the Ear Center of Green Pastures Hospital (International Nepal Fellowship, INF) in Pokhara.

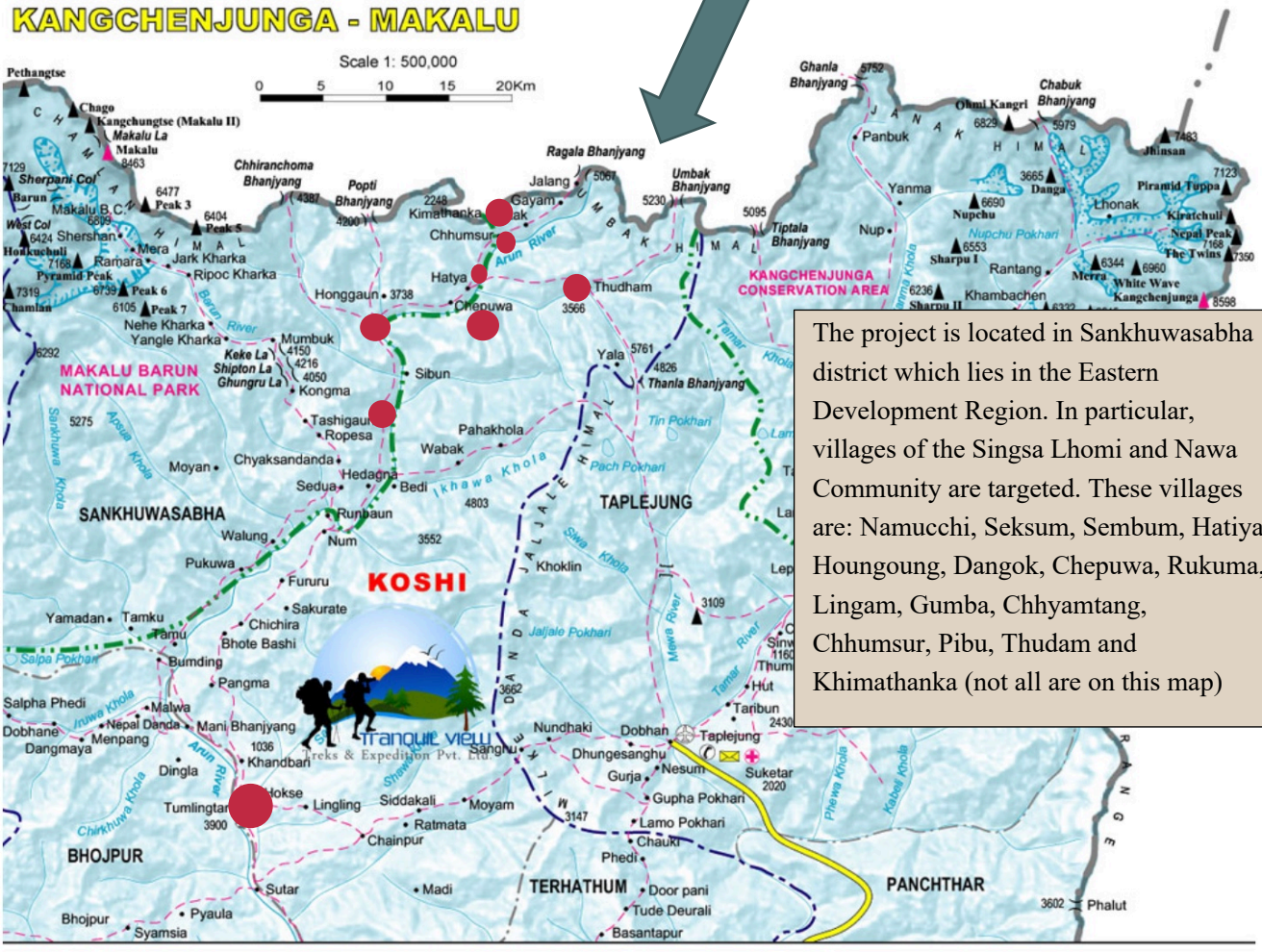
In 2017 she married Dorchi Nuppa Bhote and both desired to work among Dorchi's own people group in the future. Dorchi is a Singsa Lhomi who grew up in the Himalayas of Nepal's Northeast (Upper Arun Valley, Sankhuwasabha District).

Since 2018 they are now both supporting the "Nepal Lhomi Society" (NELHOS) who has been conducting different projects among the Singsa Lhomi since 2008. In Austria, they are supported by the "Kirche im Kino" (KiK) and "Hilfe die ankommt" (Hda), an Austrian non-governmental organization (NGO).

Please visit the following websites for further information: www.hilfedieankommt.at, www.nelhos.org, www.dagu-himalaya.org, https://www.facebook.com/HearMe-470636716694152/?ref=bookmarks

Contact details: Sandra Eisner
e-mail: sandra.eisner@gmx.at, sandra.eisner@hilfedieankommt.at
phone number: +977 9810342446 (Nepal), +43 69911858999 (Austria)

Project Location



The project is located in Sankhuwasabha district which lies in the Eastern Development Region. In particular, villages of the Singsa Lhomi and Nawa Community are targeted. These villages are: Namucchi, Seksum, Sembum, Hatiya, Houngoung, Dangok, Chepuwa, Rukuma, Lingam, Gumba, Chhyamtang, Chhumsur, Pibu, Thudam and Khimathanka (not all are on this map)

Description of activities carried out in 2018

In February 2018, a meeting with the director of the "Nepal Lhomi Society" (NELHOS) took place in Kathmandu. NELHOS has been running a local health post in Lingam since 2015. The health post workers are noticing that only a few patients visit the health post and usually in an advanced stage of their disease. Home remedies and religious beliefs are still playing an important role within the community. Thus, NELHOS aims to raise awareness about different health topics and the importance of seeking early advice and treatment at the clinic. For 2018, the following health topics were defined: **1.) hand washing 2.) oral hygiene 3.) ear and hearing health**

Table 1 is giving an overview of activities carried out in 2018. The following section will then explain each activity in detail.

	duration	activities
field visit 1	2 weeks	survey, building relationships, first impression and interviews with local people
field visit 2 and project start	6 weeks	regular visit at the clinic, orientation and overview, trial visits in 3 schools (Arun Top Boarding School, Chepuwa and Rukuma schools) and health education regarding ear and hearing health, hand washing and oral hygiene
office work	3 months	proposal writing, developing material, finding financial support, developing a website, planning and organizing next programs
health edcuation in 5 local schools	4 weeks	health education regarding ear and hearing health, hand washing and oral hygiene incl. ear syringing in the schools of Kimathanka, Chhumsur, Dangok, Houngoung and Namuje,
office work	2 months	report writing, proposal writing, fundraising, updating the homepage, feedback to Hda and NELHOS; developing future strategies

Table 1: Activities carried out in 2018 by Dorchi Nuppa Bhote and Sandra Eisner regarding health education in local schools of the Upper Arun Valley of Sankhuwasabha District (Eisner, 2018)

Field visit 1:

In February / March 2018, Dorchi Nuppa Bhote and Sandra Eisner visited the Upper Arun Valley for 2 weeks. This was their first visit with the goal to get a general impression. They spoke to local health care workers and people about current projects, concerns and future plans. They conducted a basic survey about health needs.

Field visit 2 and project start:

From April 23rd until June 12th the project coordinators stayed in Chepuwa and visited the Jhyambe Mengang Clinic in Lingam on a regular basis. The aim was to get an idea about patient inflow and their complaints, local practices, other health care facilities and past and current projects. Basic awareness material regarding ear and hearing health was developed and 3 trial visits to local schools were organized. This included:

- **Arun Top Boarding School:** ear and hearing health only
- **Chepuwa School:** hand washing, oral hygiene, ear and hearing health including the distribution of soaps, toothbrushes, toothpastes to students and ear syringing
- **Rukuma School:** hand washing, oral hygiene, ear and hearing health including the distribution of soaps, toothbrushes, toothpastes to students and ear syringing

Office work:

During the monsoon time the Upper Arun Valley is affected by heavy rainfalls and travelling is almost impossible and dangerous. Thus, the project coordinators stayed in Kathmandu and got all the paper work done. This included writing reports and proposals, raising funds, starting a homepage and planning the next programs.

Health education in 5 local schools:

From November 10th to December 16th the project coordinators visited the Upper Arun Valley and conducted health education projects including ear syringing and the distribution of soaps, toothbrushes and toothpastes in 5 local schools. The schools were located in Kimathanka, Chhumsur, Dangok, Houngoung and Namuchhi. The team consisted of both project coordinators, health post worker Kija Ridar Bhote from the Jhyambe Mengang Clinic and Guru Bhote who worked as a helper and porter. Over this time period, the team members walked 177 km by foot.

Office work:

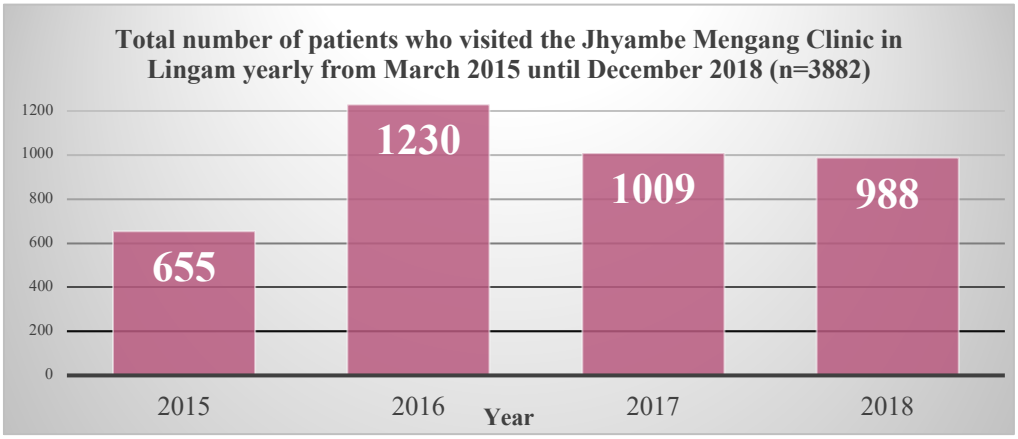
The last phase in 2018 included report writing, proposal writing and updating supporters as well as the new homepage. Additionally, plans for 2019 , decisions about other programs, additional health topics and changes were to be made. Final meetings with NELHOS and Hilfe die ankommt were necessary and future plans / projects had to be approved by key people.

Patient statistics from the Jhyambe Mengang Clinic in Lingam regarding Ear Pathology (March 2015 until December 2018)

The Jhyambe Mengang Clinic is a private health post which was opened by the Nepal Lhomi Society in 2015. Two health care workers (1 CMA, 1 ANM) are employed who, among other things, record each patient's name, age, gender, complaint and suggested treatment. These patient records were viewed and ear and hearing related complaints were put into an Excel Spreadsheet and then analyzed. The following paragraphs contain the results:

Total number of patients visiting the Jhyambe Mengang Clinic from March 2015 until December 2018

Graph 1 is showing the total number of patients who visited the health post in Lingam between 2015 and 2018. Overall, the total number of patients registered between March 2015 and December 2018 was 3882. The busiest calendar year was 2016, which had around twice that of the quietest (2015, 655 patients). In both years, 2017 and 2018, similar patient numbers were recorded with 1009 and 988 respectively.



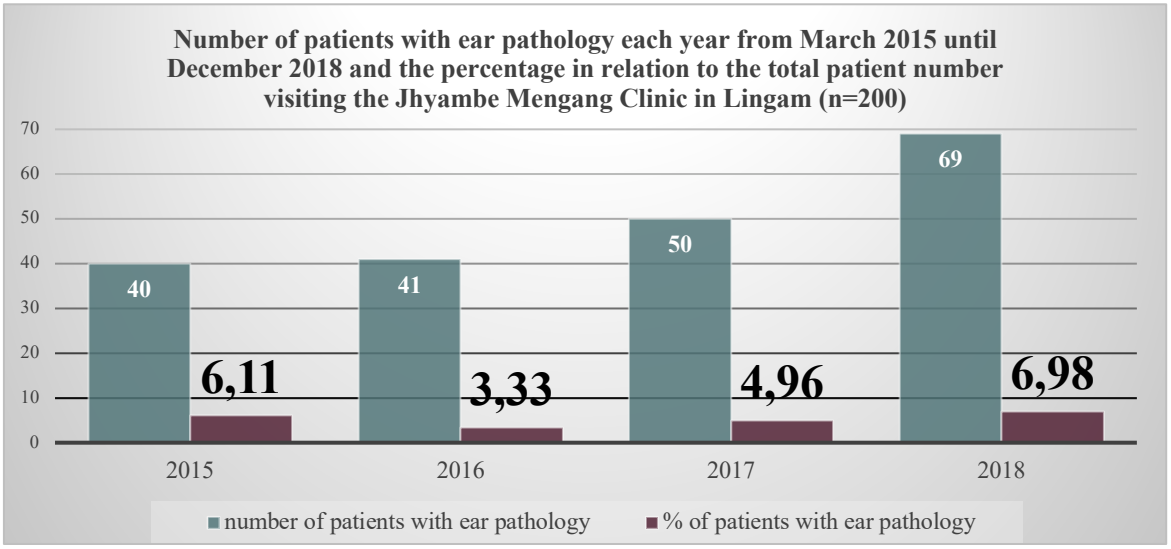
Graph 1: Total number of patients who visited the Jhyambe Mengang Clinic in Lingam yearly between 2015 and 2018 (Eisner, 2018)

Number of patients who were diagnosed with ear pathology and the percentage in relation to the total patient number each year from 2015 to 2018

Graph 2 is showing the distribution of ear pathology among patients of the Jhyambe Mengang Clinic between 2015 and 2018. The graph furthermore includes the percentages of affected patients in relation to the total patient number of 2015, 2016, 2017 and 2018. Overall, the number of patients with ear pathology was steadily increasing from 2015 to 2018 whereas the percentage was first decreasing and increased again after 2017.

Moreover, the number of patients presenting with ear pathology steadily increased from 40 patients in 2015 up to 69 patients in 2018. The percentage additionally demonstrates the relation of patients with ear pathology to the total patient number each year. Initially, the percentage was

6% which in 2016 slightly decreased down to 3%. In 2017 and 2018, the percentage increased again up to 5% and 7% respectively. In summary, patients with ear pathology were increasingly recorded at the Jhyambe Mengang Clinic since the opening of the clinic in March 2015.

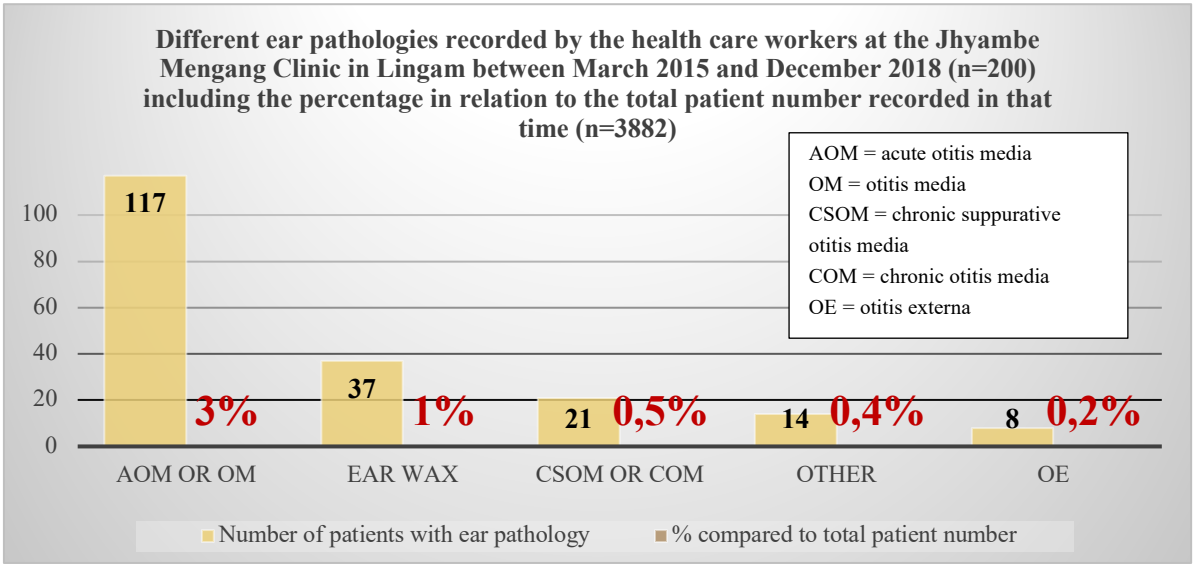


Graph 2: Number of patients with ear pathology recorded in 2015, 2016, 2017 and 2018 and the percentage in relation to the total number of patients visiting that year (Eisner, 2018)

Different ear pathologies diagnosed in patients at the Jhyambe Mengang Clinic in Lingam between 2015 and 2018

Graph 3 shows the different ear pathologies diagnosed by the two health care workers in all patients visiting the Jhyambe Mengang Clinic from 2015 to 2018. In general, 200 patients out of all had some sort of ear pathology which was either acute otitis media (AOM), otitis media (OM), ear wax, chronic suppurative otitis media (CSOM), chronic otitis media (COM), other diseases or otitis externa (OE). Overall, the main complaint was AOM and OM followed by ear wax. Otitis media was only diagnosed in a few patients. Moreover, AOM and OM was recorded in 117 patients compared to 8 with otitis media. AOM and OM are followed by ear wax and COM or CSOM with 37 and 21 patients respectively. Other ear pathologies such as foreign body was seen in 14 patients. Additionally, graph 3 shows the percentage of patients with ear pathology in relation to the total patient number recorded between 2015 and 2018 (n=3882). AOM or OM was present in 3%, impacted ear wax in 1%, chronic conditions were seen in 0,5%. The least recorded diseases were OE and other pathologies such as a foreign body in 0,2% and 0,4% respectively.

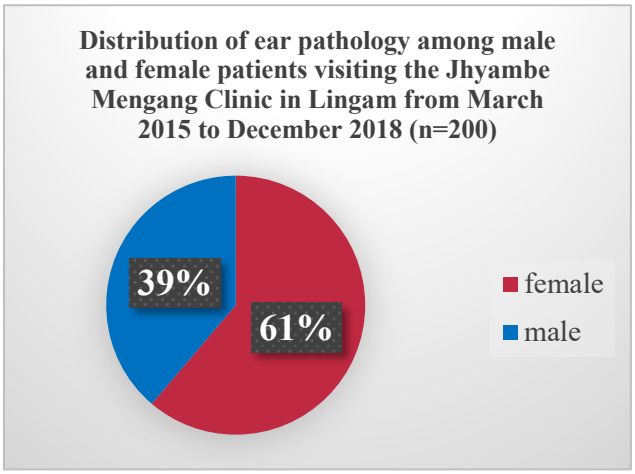
In summary, AOM and OM was recorded in the majority of those patients presenting with ear pathology.



Graph 3: Different ear pathologies diagnosed in patients visiting the Jhyambe Mengang Clinic in Lingam between March 2015 and December 2018. (Eisner, 2018)

Distribution of ear pathology in male and female patients

Graph 4 contains the distribution of ear pathology among male and female patients visiting the Jhyambe Mengang Clinic in Lingam from 2015 until 2018. Overall, out of 200 patients with ear pathology recorded since 2015, more female (61%) than male (39%) patients were affected.

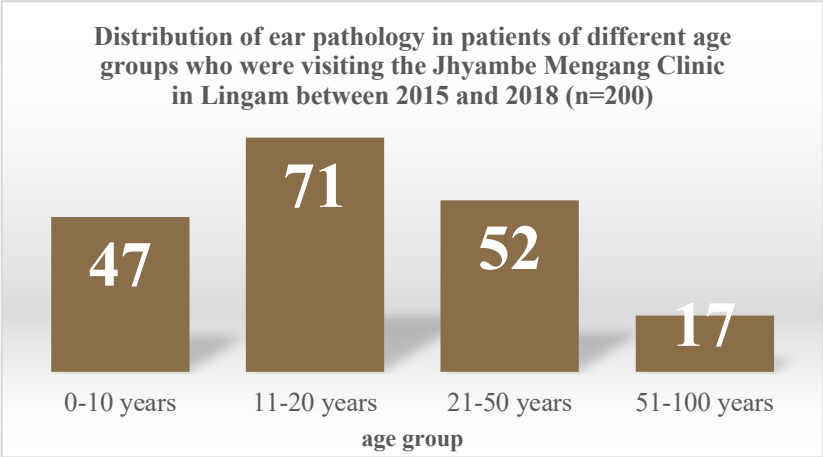


Graph 4: Distribution of ear pathology among male and female patients visiting the Jhyambe Mengang Clinic in Lingam from March 2015 until December 2018 (Eisner, 2018)

Ear pathology presenting in patients of different age groups

The distribution of ear pathology in patients of different age groups is demonstrated in graph 5. Overall, most patients (71) with ear pathology were between 11 and 20 years compared to only a small number (17) who were over 50 years of age. 52 patients were between 21 and 50 years

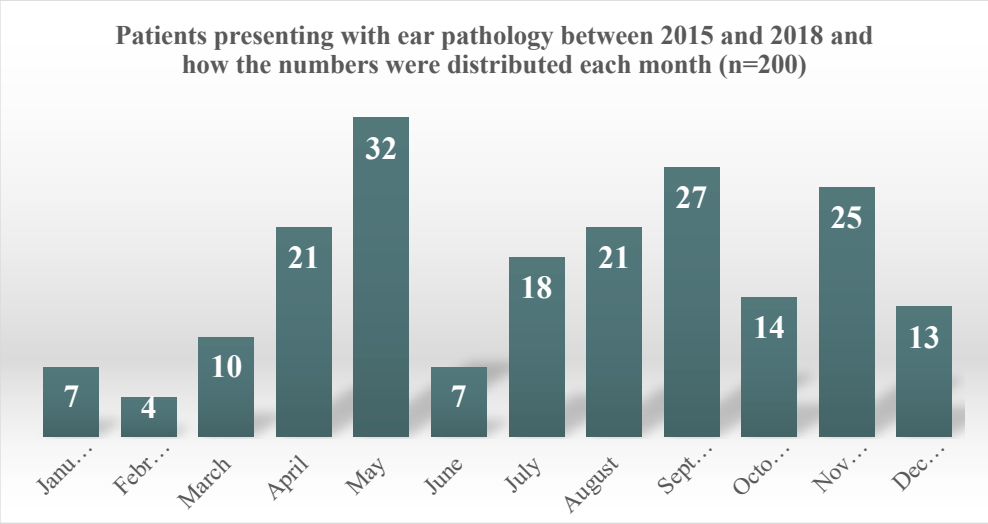
and 47 below 10 years of age. Thus, the majority of patients with ear pathology presenting at the Jhyambe Mengang Clinic between 2015 and 2018 were below 20 years of age.



Graph 5: Distribution of ear pathology in patients of different age groups visiting the Jhyambe Mengang Clinic in Lingam between 2015 and 2018 (Eisner, 2018)

Distribution of patients presenting with ear pathology each month from January to December (all patient records were included)

The distribution of patients with ear pathology who visited the Jhyambe Mengang Clinic each month is shown in graph 6. Out of 200 patients presenting with ear pathology since 2015, most patients visited in May, September and November. The least patients were recorded in January, February and June. Moreover, 32 patients visited the Clinic in May which is followed by 27 in September and 25 in November. Only 4 patients came in February followed by 7 in January as well as June.



Graph 6: Monthly distribution of patients with ear pathology who visited the Jhyambe Mengang Clinic between March 2015 and December 2018 (Eisner, 2018).

Discussion 1

The Jhyambe Mengang Clinic (JMC) in Lingam is a private health post (HP) and opened in 2015. Compared to government facilities, private institutions charge for their services. The JMC is only asking a small service fee of 30 Nepalese Rupees, medicines are not exceeding the purchase price. At the beginning, very few patients visited the HP but numbers were rising the following year. The HP workers reported that the local community began to trust them and came to see them more often. This is reflecting the rising patient number from 655 in 2015 to 1230 in 2016. Although the clinic started in March (9 months in 2015), patient numbers are still higher in 2016 (12 months). This is compared to a decrease in patient numbers in 2017 and 2018, which is due to an increase in implementation of government health care facilities in the region. Thus, the same region (and their inhabitants) is now serviced by more health facilities demonstrating development and improvement.

Since the opening of JMC, the number of patients reporting ear pathology is rising. Between 2015 and 2018, 200 out of all 3882 recorded patients were diagnosed with some sort of ear pathology totaling 5%. In 2016, 3% presented with ear disease while the number increased up to 7% in 2018. Thus, patients seem to consult with JMC about their ear diseases more frequently.

Among the most diagnosed complaint was acute otitis media or otitis media in 117 patients followed by impacted ear wax in 37 patients. Otitis externa was only seen in 8 patients. Moreover, acute ear infections were present in 3%, impacted ear wax in 1% and otitis externa in 0,4% of all patients recorded between 2015 and 2018 (n=3882). The number of patients with ear pathology coming to the JMC is low compared to other places and surveys in Nepal. The first research about the prevalence of ear disease and hearing loss in Nepal was conducted in 1993 by Little et. al. where the researchers diagnosed 7.4% of the study population with ear drum pathology. Another and more recent study of 2012 conducted by Thakur et. al found 48% of the study population affected by some sort of ear pathology. They conducted a study among patients of 45 combined eye and ear camps held at different rural places of Sunsari and Morang district. Out of 2256 patients, 4.2% had acute suppurative otitis media, 29.15% had impacted wax and 28.04% had chronic otitis media. Similar results were found by Rijal et. al in 2011 they conducted an analysis of records of children presenting with ear disease at the Nepal Medical College Teaching Hospital (Kathmandu) where 2218 medical records were included. Acute otitis media was seen in 24.3%, impacted ear wax in 40.2%, chronic otitis media was present in 17.7% and otitis externa in 7.5%. In summary, the numbers conducted in these studies show high numbers of patients affected by ear disease and hearing loss. Compared to these surveys, a much smaller number is presenting at the JMC. This could reflect the fact that most people with ear disease and / or hearing loss won't come and seek treatment due to a lack of awareness and knowledge about consequences and treatment, local people being less health conscious (ear disease and hearing loss is viewed as a minor issue), and less accessible health facilities. Another contributing factor might be inconsistent diagnosis (no standardized diagnostic criteria) as well as lack of in-depth knowledge about ear diseases and hearing loss by the health care workers.

Chronic ear conditions were noted in 21 cases which makes up 0,5% of all patients recorded from 2015 to 2018 (n=3882). But the hidden number and according to the WHO, *"a prevalence of >1% of COM in children in a defined community indicates that there is an avoidable burden of the disease, but which can be dealt with in the general health care context. A prevalence of >4% indicates a massive public health problem which needs urgent attention in targeted population"* (World Health Organization 1996).

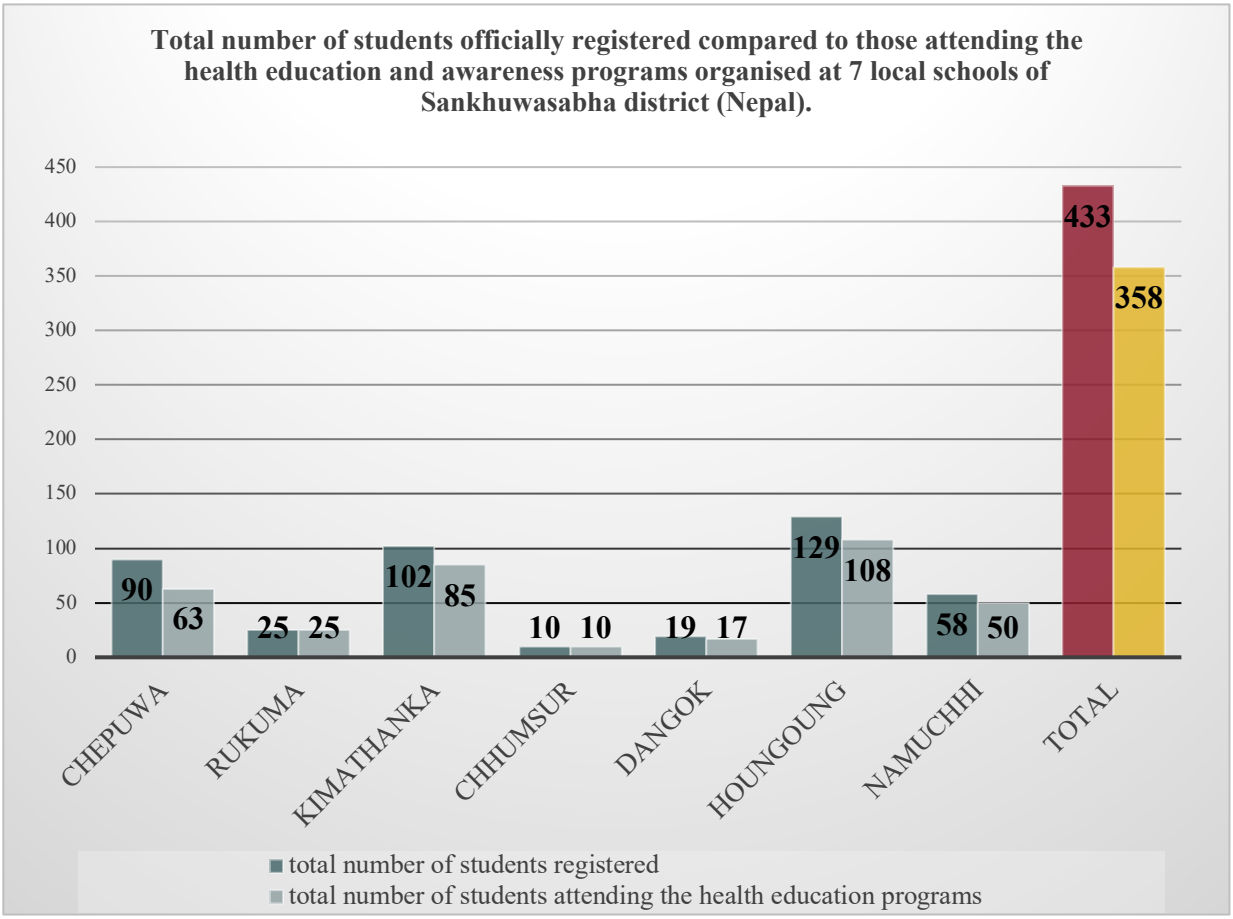
At JMC, more female patients (61%) than male patients (39%) were diagnosed with ear disease which is similar to the findings of Thakur et. al (females 55%, male 44%) but different to the study conducted by Rijal et. al (male to female ratio 1,5:1). This could reflect the fact that females are more aware of their health condition and willing to change it. Furthermore, most patients with ear pathology were between 11 and 20 years. Interestingly, no patient presented with (age related) hearing loss.

Patients with ear pathologies visited the JMC throughout the year but the following months were much busier: May (32 patients), September (27 patients) and October (25 patients). Very few patients were recorded in January (7 patients), February (4 patients) and June (7 patients). This is reflecting the following regional factors: In January and February, many people leave the area and move down to warmer places such as Khandbari or Dharan which is why patient numbers are lower compared to other months. In June, most people are busy from dusk until dawn with field work. June and July are the high season for planting millet which is again reflecting the fact that many people won't visit a health post if no emergency happens.

Statistics from the health education and awareness programs conducted in 7 schools of the Upper Arun Valley (Sankhuwasabha district) in 2018

In 2018, a total of 7 schools were visited and health education programs were carried out. The programs were organized by Dorchi Nuppa Bhote and Sandra Eisner. A small team, including both organizers, a local health post worker (Kija Ridar Bhote) and a helper / porter (Mingma Bhote) visited the schools of Chepuwa, Rukuma, Kimathanka, Chhumsur, Dangok, Houngoung and Namuchhi. All schools are located in the Upper Arun Valley of Sankhuwasabha district in Eastern Nepal. The topics included: *hand washing, oral hygiene and ear and hearing health.* Additionally, the student's ears were examined and syringed if necessary. The following graphs and statistics are demonstrating different numbers and percentages collected at these programs.

Total number of students registered compared to those actually attending the health education and awareness programs



Graph 7: Total number of students registered compared to the total number of students attending the health education and awareness programs at 7 local schools of Sankhuwasabha district in Eastern Nepal (Eisner, 2018)

Graph 7 is showing the total number of students who were officially registered in the school years of 2017/18 and 2018/19 compared to those who actually attended the health education programs. Each school and their equivalent numbers are shown in the graph. Overall, there are less students

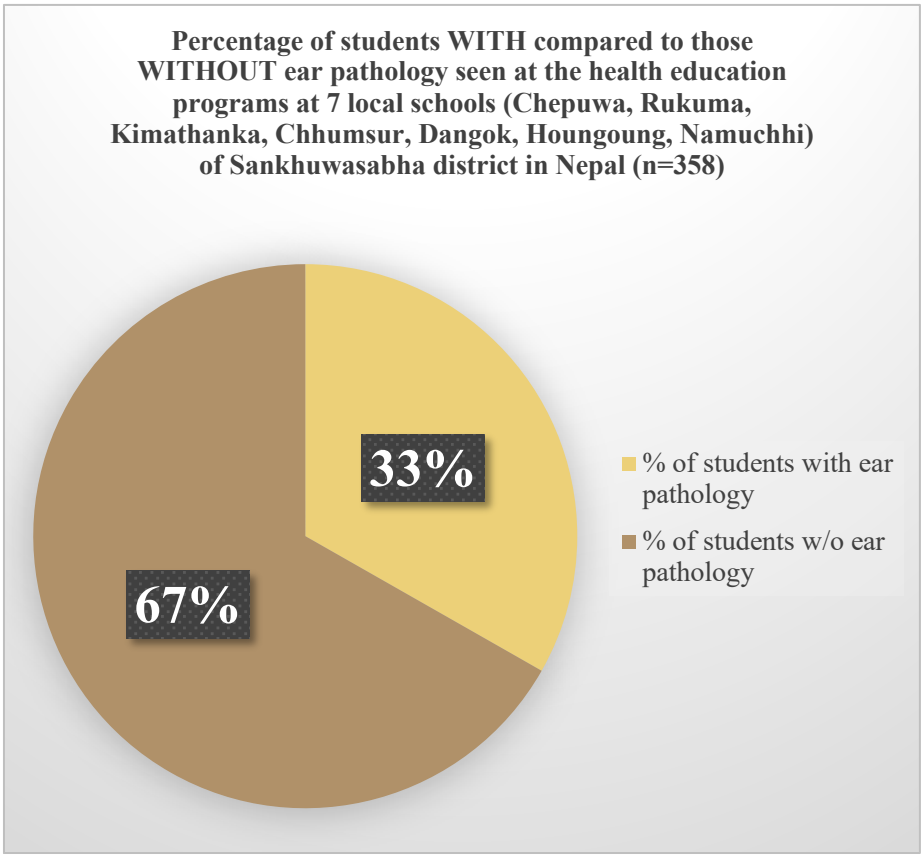
attending the programs than what is recorded at the schools. Some of the students don't attend school regularly.

Moreover, a total of 425 students were registered at Chepuwa (90), Rukuma (25), Kimathanka (102), Chhumsur (10), Dangok (19), Houngoung (129) and Namuchhi (58). Compared to this, 358 students were actually present at the time of the programs. This included 63 students in Chepuwa, 25 in Rukuma, 85 in Kimathanka, 17 in Dangok, 108 in Houngoung and 50 in Namuchhi. The most obvious difference between registered students and those actually attending was noted in the school of Chepuwa where 27 students were missing at time of the programs. This is followed by the school in Houngoung where 20 students didn't attend the programs. No students were missing in the schools of Rukuma and Chhumsur.

Percentage of students with and those without ear pathology as well as their distribution at each school

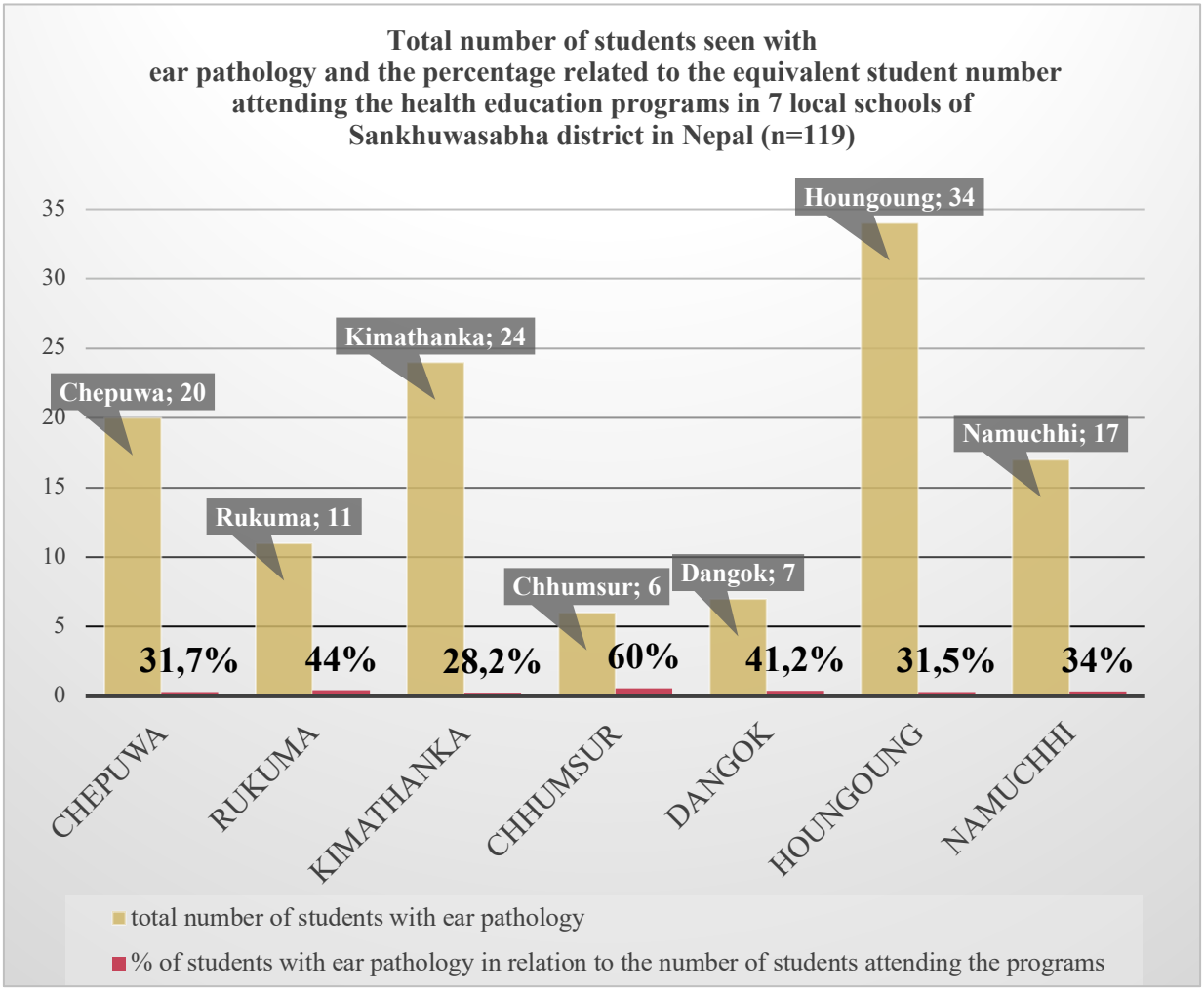
Graph 8 is demonstrating the percentage of students WITH compared to those WITHOUT ear pathology.

Out of 358 students attending the programs, 33% (119 students) had some sort of ear pathology. This included: *impacted ear wax, acute otitis media, chronic otitis media, foreign body in the ear canal, dry and itchy ears, tinnitus* as well as *dry perforation.*



Graph 8: Percentage of students with and those without ear pathology at the health education and awareness programs conducted in 7 different local schools of Sankhuwasabha district in Eastern Nepal (Eisner, 2018)

In graph 9, the total number of students with ear pathology and the percentage related to the equivalent student number at each school is shown. In general, the percentage of students with ear pathology is high in every location ranging from 28,2% to 60%. The highest percentage was noted in Chhumsur where 60% of the students (6 out of 10) had some sort of ear disease. The lowest percentage was recorded in Kimathanka with 28,2%.

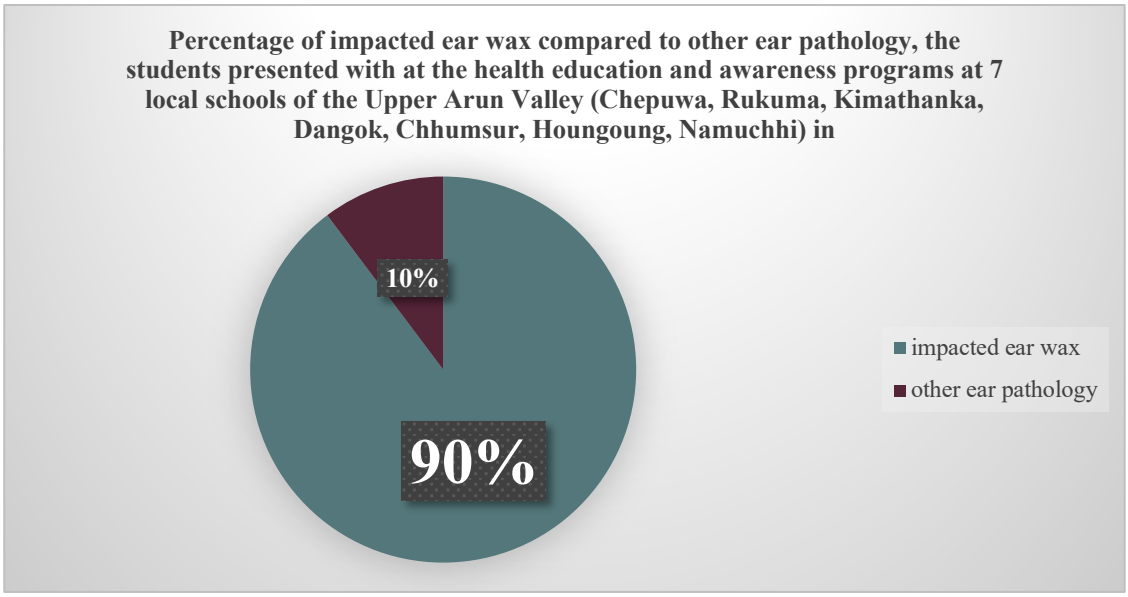


Graph 9: Number of students with ear pathology and the percentage related to the student number at each school (Eisner, 2018)

Percentage of students with impacted ear wax compared to those with other ear pathology as well as the distribution of students with bilateral and unilateral impacted ear wax

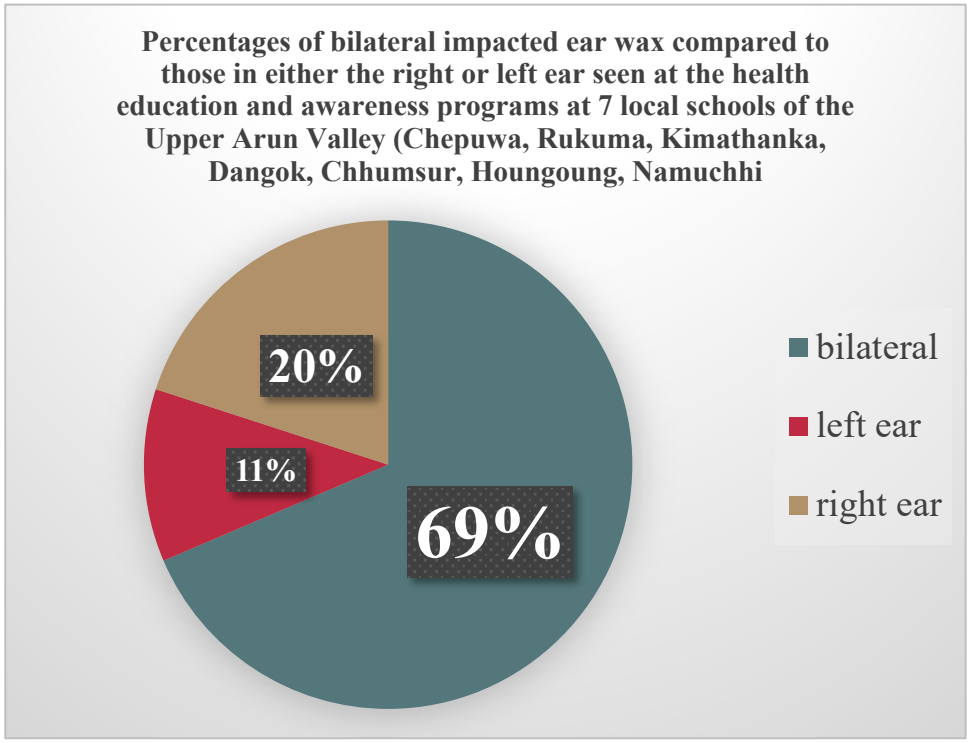
Graph 10 is demonstrating how ear wax and other ear pathologies were distributed among those students attending the programs at the different schools.

Overall, impacted ear wax was the predominant ear pathology, making up 90% of all ear pathology cases (n=119). The remaining 10% had other complaints such as mentioned above. In summary, the majority of students were presenting with impacted ear wax and had to get their ears syringed.



Graph 10: Percentage of impacted ear wax compared to other ear pathology seen in students attending the health education and awareness programs at 7 local schools of the Upper Arun Valley in Sankhuwasabha district of Nepal.

Additionally, graph 11 is demonstrating the distribution of bilateral and unilateral (left / right ear) impacted ear wax among those students affected. Overall, the majority had bilateral ear wax. Moreover, 69% out of 105 students were complaining about ear wax in both ears. This is compared to 20% with ear wax in the right ear and 11% in the left.



Graph 11: Distribution of bilateral and unilateral impacted ear wax in students attending the health education programs in 7 local schools located in the Upper Arun Valley of Sankhuwasabha district (Eisner, 2018)

Discussion 2

Ear disease and hearing loss are a major public health issue worldwide but are often neglected in many developing nations in particular regions within Sub-Saharan Africa and South Asia.
A nationwide survey about ear disease and hearing loss in 1993 (Little et. al) revealed that 16.6% of the study population (>5 years of age) had a hearing loss based on the following definition: >30dB loss in 1kH to 4kH or >50dB in 500Hz (in either ear). Another 7.4% were diagnosed with ear pathology such as acute or chronic otitis media. The percentages at the recently conducted health education programs in 7 schools of Sankhuwasabha district of Eastern Nepal were much higher. The overall percentage of students with ear pathology was 33%, 88% of them had impacted wax and another 12% presented with other ear problems. Hearing was not tested. The numbers are not correlating with Little et. al's results but are similar to other projects conducted by different researchers among school going children in various districts of Nepal. In 2006, 32% of school children (1050 children, government school in the Morang district) between the age of 5 to 15 were identified with ear disease, 12.47% had hearing loss and 13.2% otitis media (Maharajan et. al 2006). Between 2007 and 2008, researchers conducted a study in four schools (5-12 years, 1245 children) and found 75% with ear disease, 7.6% with hearing loss and 5.7% with chronic suppurative otitis media (CSOM) (Adhikari et. al 2008). In 2015, participants at an eye health camp in the Sunsari and Morang district were screened for ear disease (all ages, 2259 visitors) and 48% presented with ear disease, 64% had hearing loss, 28% were identified with CSOM, 17% with otitis media and 18.2% suffered from sensorineural hearing loss (SNHL) (Thakur et. al 2015).

The health education programs in the Upper Arun Valley in 2018 were organized in order to raise awareness about ear and hearing health. As part of the programs, ears were checked and syringed if necessary. Altogether, 358 students attended the programs and 119 presented with ear pathology totalling 33%. The overall percentage is similar compared to the study conducted by Maharjan et. al in 2006 with 32% and Thakur et. al in 2015 with 48%. Higher numbers were found by Adhikari et. al in 2008 where 75% had ear disease. The Upper Arun Valley is a very remote region in Eastern Nepal which would explain the high percentage of students with ear pathology. Local health post workers are not properly trained in ear syringing nor do they have the necessary equipment. Additionally, a lack knowledge and awareness among the local community about the need to check ears and consequences of ear disease and hearing loss exists.

The percentage of affected students is high in every school ranging from 28% in Kimathanka and 60% in Chhumsur. Interestingly, these places are the remotest ones in that area. But compared to Chhumsur, a health post is located in Kimathanka. These numbers show the importance of having proper access to health facilities. That is not having easy access to a health post is a barrier for people seeking treatment. Non-life-threatening diseases in particular will not get treated and the risk of developing long-term damage is high.

90% of the students presented with impacted wax compared to those who had other ear pathologies. This is a very high percentage compared with other studies conducted in Nepal. Between June 2007 and May 2008 Adhikari et. al examined 1254 randomly selected students of 4 different schools and found that 60% of them had impacted ear wax. In 2009 Adhikari conducted another study among rural school children of Kathmandu valley and found that 81% had some sort of ear disease. 64% out of them had impacted ear wax. Although both studies represent high numbers of students with ear disease, the percentage in the Upper Arun Valley was even higher. Many factors might contribute to this which are yet to find out.

Among those students with impacted wax, a bilateral disease was predominant (69%). Impacted ear wax causes temporary mild conductive hearing loss (Adobamen et. al 2012). Specifically, depending on the grade of occlusion, hearing loss in patients with impacted ear wax ranges from 5 and 15.4 dB with a mean hearing loss of 8.7 in high frequencies (4-8kHz), 9.3dB in mid frequencies (1+2kHz) and 9.5dB in low frequencies (250-500Hz) (Hydri et. al 2016). Effects of mild hearing loss (bilateral or unilateral) on language learning and performance in school are controversial and uncertainties related to the impact remain. While studies have shown that language skills often develop normally, children might be at risk of performing poorer academically than their normal-hearing peers (Boston Children's Hospital).

Summary and Recommendations

There are some main points to be drawn out of this report / analysis and recommendations for the future:

- There is a lack of knowledge about ear disease and hearing loss, their symptoms, impact and complications among the local community of the Upper Arun Valley. Thus, only a few are seeking help at the health posts.
- Most health care facilities are not easily accessible, and it requires long hours of walking to reach them. Additionally, health post workers are not specialised in treating ear disease and / or hearing loss and there is no proper equipment or specific medicines available.
- Specialised health care facilities are far and expensive to reach e.g. the closest ENT department is in Dharan which takes several days to reach from the Upper Arun Valley Region. Furthermore, it's difficult for local people to finance transport and treatment. Some might not even see the benefit in spending money to treat ear disease which is often viewed as a minor disease.

- Nonetheless, there are many people with untreated ear disease and hearing loss which requires attention and action:
    - It's crucial to raise awareness among the local community about ear disease and hearing loss and the importance of treating it early and properly.
    - Training of local health post workers in examining ears, diagnosing ear disease and hearing loss as well as treating it properly and giving advice to patients and families is necessary.
    - Connecting the health post workers with a specialized ear and hearing centre is important for further treatment of patients with more complicated diseases.
    - Creating a fund for financial support of patients with ear disease who would need further treatment such as surgery and / or hearing devices.
    - Initiating hearing screenings as well as providing hearing aids and hearing aid repair services to the local community.

Perspectives for 2019

The programs were widely welcomed at the local schools. Parents heard from their children about the different health topics and some even visited the Jhyambe Mengang Clinic to seek further advice. The ear syringing was a highlight and many people seen were syringed. These are the plans for 2019:

- Health education programs in the 6 remaining schools of Seksum, Sembum, Hatiya, Chhyamtang, Gumba and Lingam.
- Training of local health care workers in the Upper Arun Valley. The district health officer expressed his interest in collaborating
- equipment such as syringe, otoscope, tele-communication
- communication with specialized hospital is needed
- financial support system
- make hearing aids accessible

Report written by: Sandra Eisner, BSc

Simaltar, Kapan / 44600 Kathmandu

Nepal Lhomi Society (www.nelhos.org), Hilfe die ankommt (www.hilfedieankommt.at), Dagu Himalaya (www.dagu-himalaya.org)

e-mail: sandra.eisner@hilfedieankommt.at

Tel. No.: +977 9810342446 (Nepal), +43 699 11858999 (Austria)

Date: December 20st, 2018 Signature: 

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