

Fall 2018

Uphill Struggle: Impediments and Facilitators to Porter Health in the Khumbu Region

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UPHILL STRUGGLE: IMPEDIMENTS AND FACILITATORS TO PORTER HEALTH IN THE KHUMBU REGION



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Biology

Asia, Nepal, Solukhumbu

Submitted in partial fulfillment of the requirements for Nepal: Tibetan and Himalayan Peoples,
SIT Study Abroad, Fall 2018

ABSTRACT

The surge of Nepal's tourism industry has resulted in new waves of tourists visiting popular trekking areas such as the northern Khumbu region of the Solukhumbu District. One effect of this growing industry has been the increased prominence of porters in the area. Coming mostly from lowlands south of the Khumbu, porters are composed mainly of young individuals looking to make a career in the enticing business of trekking and mountaineering tourism. The current status of porter health in Solukhumbu is poor. Many ailments exist to physical and social well-being, and social segregation, incentives to carry heavier loads and a lack of basic health needs have left the porter population victim to a system that sacrifices health for financial profit.

This study was done to determine the common impediments to porter well-being and to analyze current actions being taken to improve porter health. Interviews were conducted around settlements in Khumbu along the trail from Phaplu to Gokyo. Altitude illness and respiratory infections were common diseases for the regional porter population, and impediments to well-being included inadequacies in equipment, accommodation, insurance and education. Clothing centers, education workshops, porter shelters, awareness campaigns and an insurance program are some of the actions currently being taken in the area to improve porter health, though poor awareness, trekking company influence, and perceptions among porters have prevented widespread use of these resources. Altruism and abandonment were both common themes relating to porter health, highlighting the ethical nature of this topic.

ACKNOWLEDGEMENTS

A gigantic thank you goes out to Mingma Yangji Sherpa, who skillfully, humbly and graciously provided her service as a guide/translator/friend (though not as a porter) during field research. Thank you to the SIT NPT staff for their valuable insight and resources and to Dr. Holly Andrews and the other IPPG volunteers for sharing your hot mango juice with us. Thank you to KEEP for donating some of your time to me even during your move-in to the new office. Thank you to Norbu Sherpa for letting me use his camera in place of my mediocre phone camera during field research. Thank you to the Everest Eco Hotel in Lukla and to Hotel Mountain View in Namche for their wonderful accommodation and riggi kur. And thank you to all of the healthcare workers, lodge owners, guides, and porters who talked to me and made my experience in Solukhumbu a memorable one.

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INTRODUCTION

Located at the epicenter of early Himalayan mountaineering efforts, Khumbu – the northern region of Solukhumbu, Nepal – is home to both spectacular mountain scenery and a surging tourism industry. Since the early expeditions nearly one century ago, the commercialization of mountaineering and trekking has dramatically expanded to become accessible to larger populations of tourists. This industry has rapidly become the main source of revenue for the local population; profitable occupations as lodge owners and mountaineers have replaced old livelihoods as farmers and traders, and small farming settlements have exploded into towns incorporating bars, restaurants, souvenir shops and bakeries.

One result of the increase in tourism has been the growth of the Himalayan porter occupation. In a region devoid of roads, human labor is the primary means of transporting goods for both community and commercial use. For centuries, people laden with large baskets of food and supplies walked for miles between Himalayan settlements, traversing a rugged terrain of mountains, rivers and valleys while carrying loads often close to or exceeding their own weight. In the past decades, the growth of tourism has facilitated new opportunities for porters, and each trekking season waves of people make the journey from their home villages to regions such as Solukhumbu to transport supplies to fuel the industry.

Working conditions for these porters are often dismal. Frequently carrying heavy loads with inappropriate equipment, porters have been subject to intense occupational hazards due to their physically taxing line of work in a dangerous geography. Often migrating from lower-elevation areas far from Khumbu, many porters are not accustomed to the local geography, putting them at further risk of environmental illness and injury. Porters often represent the Rai, Tamang, and other lowland ethnic groups, and are socially separated from the dominant Sherpa ethnic group. Economic structures have also facilitated hardships; incentives for carrying heavier loads, local inflation, and financial dependence on guides and trekking agencies have all contributed to mold portering into a virulent occupation where health is sacrificed for wage. Preventable tragedies involving porters are all too common:

In 1997, a young Nepali porter employed by a trekking company became severely ill with altitude illness. He was paid off and sent down alone. It took just another 30 hours for him to die.... He was 20 years old and left behind a wife and 2 small children.

(International Porter Protection Group)

In this region where tragic accounts of mistreatment are plentiful yet statistics of mortality and morbidity are almost nonexistent, the status of porter health is clearly one of anguish. Several groups have tackled the issue through a diversity of methods to varying degrees of success. This is a complicated issue of ethics, economy, and environment, and for the porter, clearly a matter of life or death.

A BRIEF HISTORY OF THE KHUMBU PORTER

Portering in the Solukhumbu region has undergone many changes over the last century. Before the onset of mountaineering in the 20th century and the current trekking industry in Nepal, portering was a necessary element of everyday life for most people in the region. In the late 1800s the Indian region of Darjeeling (just East of Nepal) saw the first porter involvement related to foreign industry. British activity in the region resulted in employment of local people to work as basic porters, laborers, surveyors of the surrounding lands, and as support on climbing expeditions.

Baggage "coolie" (porter), Darjeeling, India, approximately 1895. Retrieved from <http://nla.gov.au/nla.obj-153011344>

By the 1920s, attempts to summit Mount Everest had begun in Tibet, and expedition groups employed indigenous people to support their endeavors. These early expedition groups wrote many accounts of their searches for self-improvement and escape from modernism, and the local people were appealing as romanticized aspects of an untarnished and preserved "other" (Ortner, 1999).



Sherpas became particularly valued for their physical excellence during expedition work. Their prowess can be attributed to several factors: as inhabitants of the Solukhumbu area, they had generational experience in the cold climate, and their superior clothes likely gave them added warmth and advantage over groups from lower areas who were not accustomed to the inhospitable environment. Physically, Sherpas also have a metabolic adaptation that gives them a genetic advantage in performance in oxygen-deprived environments, a useful trait in the hypoxic high elevations of mountaineering expeditions (Horscroft et al., 2017). Structures within Sherpa society favored the group to work in the growing mountaineering industry as well. Portering food and supplies for the mountaineers was a familiar concept for the people as they were used to carrying heavy loads at an early age in their communities. Land division in Sherpa families gave sons unequal partitions of land, and many young men found themselves economically trapped with little ability to improve their

standing. Taxes from the Rana Kingdom of the early 1900s also limited hopes of economic progression for many young men. Mountaineering and its prospects offered a solution to many as a means to escape these barriers of social and economic growth.

By the 1920s and 30s labor strikes aimed at improving working conditions and distinguishing Sherpas as a highly skilled labor population elevated Sherpas above other ethnicities within the mountaineering industry. The job of the Sherpa was exclusively focused on highly-skilled labor of carrying loads in high altitude and setting climbing routes, while the less-skilled low altitude portering was left to other ethnic groups. This trend of Sherpa dominance has continued; in the 21st century Sherpas are associated with mountaineering achievement, and nearly all indigenous icons of mountaineering success are of Sherpa ethnicity.

Currently, most porters in the Khumbu region are not local and come to the area from lower areas in search for seasonal work. They represent many ethnic groups, and most of the porters seen in this study were of Rai heritage. Though the work of porters has always involved carrying loads over long distances, the tourism industry in Solukhumbu has opened many different areas of work, and porter jobs can be diverse. This has resulted in many different labor structures and occupational roles.

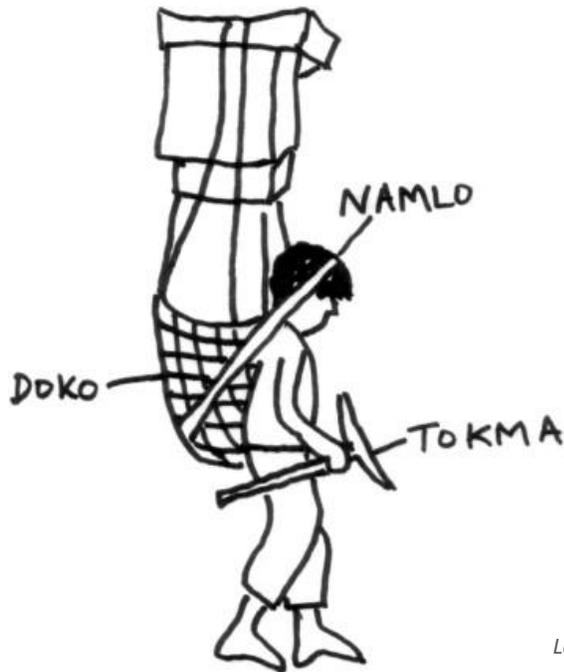
LABOR STRUCTURES

The mountaineering and trekking industry in Solukhumbu has created many occupations. Porters carry supplies and equipment, guides lead interested groups through valleys and up summits, cooks prepare food, and trekking agencies coordinate logistics. Yet within most of these occupations there are different levels to each job based on the technical skills involved. Just as some guides have technical knowledge of ice climbing and mountaineering and lead groups up Himalayan peaks, other guides are exclusive to treks where they and their group do not engage in any mountaineering. Similarly, some porters may have jobs carrying equipment up Mount Everest where they need additional climbing skills and are paid accordingly. The terms used to describe these job roles and responsibilities have changed over the years and are confusing. This report focuses on low altitude porters: people that carry materials around Solukhumbu and have their own unique demographics, responsibilities, incentives and occupational hazards.

A note on the term “Sherpa”

These days there is a widely held misconception that the term Sherpa is synonymous with high altitude work as a climber or porter. This is not true – “Sherpa” refers to an ethnic group, not an occupation. Although Sherpas became active in and associated with Himalayan mountaineering, they also work as lodge owners, traders, and professionals, not exclusively as one type of labor. Just as many Sherpas are not high altitude workers, many high altitude workers are not ethnically Sherpa.

Within the Solukhumbu porter occupation are two main sub-types of work – commercial and trekking portering. Commercial porters transport food, appliances, household supplies, firewood, even doors and parts of pool tables to be assembled later – anything that is needed for use in a settlement. They are frequently paid according to weight transported, resulting in heavy loads being carried each trip to maximize profit.

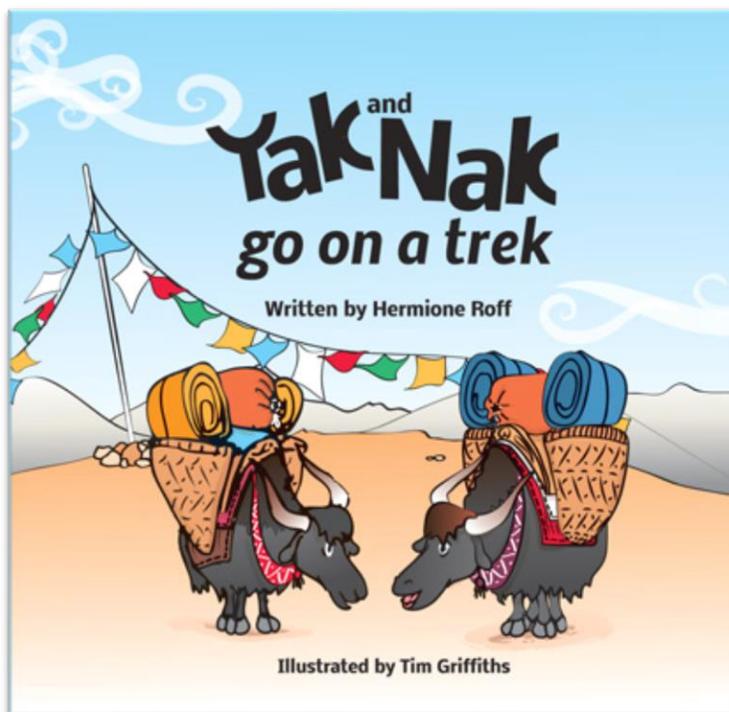


Left: The typical equipment used by porters when carrying their goods. (photo courtesy of Law and Rodway, 2013)

The other subset of portering in Solukhumbu caters directly to the trekking industry. Trekking porters carry tourists' equipment for them as they journey on their trek. They are often employed by trekking agencies and work under the supervision of a guide, though many "freelance" porters can be found every morning by the Lukla airport, advertising their services to incoming tourists who haven't affiliated with a trekking agency. These porters are usually paid a daily wage and travel with their clients day by day until the trek finishes and they repeat with a new group.

Geographically, the areas south of Lukla (and south of the Lukla airport where many trekkers begin their journey, see map in Appendix A) are almost exclusive to commercial portering. In contrast, immediately after passing Lukla large numbers of trekking porters join the ranks of commercial porters. These two types of portering have many differences in structure and wage. Compared to commercial porters, trekking porters often make higher wages, work under more job regulation, and carry less weight. Trekking porters are also limited in their rate of ascent as they move only as fast as their clients. As opposed to commercial trekkers who have an incentive to move fast and maximize deliveries, this limitation is crucial in the context of altitude sickness, where ascending too fast puts one at great risk for illness. Unsurprisingly, the advantages of the trekking porter have resulted in many commercial porters moving up from the lowlands to work as the former (Law and Rodway, 2013). However, the two portering jobs aren't mutually exclusive; one porter seen was on his second trip of the day carrying potatoes from Machhermo to Gokyo after he had already carried trekkers' gear up along the same route earlier that day.

The trekking porter occupation is part of a larger labor hierarchy. The porter is at the bottom of this hierarchy, and the lead coordinator of the trekking company staff (formally called the “sirdar” years ago) is at the top. The progression is largely merit-based, and experience, friendliness, social connection and luck all facilitate one’s ability to move up in the industry. A dutiful porter working under a trekking company might see their salary and working conditions develop considerably after a few seasons of work. A porter may be promoted to work as a kitchen hand, helping serve tourists and wash dishes, eventually assisting the chief cook in meal preparation. The worker can accumulate more experience and merit, progressing to more leadership roles in cooking and trekking, and if they receive the necessary education in areas such as language, first aid, and trekking etiquette, they can take a government-recognized class to become licensed as a guide. After years of experience as a guide, administrative jobs in trekking companies may open to them, and under the right circumstances they may even take on the role of the trek leader/sirdar. In the children’s story *Yak and Nak go on a trek*, by Hermione Roff, the yaks Yak and Nak experience this labor progression in action, becoming servers, cooks, guides, and even sirdars as they move through the labor hierarchy.



The children’s book about the yaks/porters named Yak and Nak effectively narrates the labor progression in the trekking industry from porter to sirdar.

The time taken to advance through the ranks to reach a position as a guide or trek leader varies on factors of education, personality, social connections and luck, but according to some guides and porters the time is generally said to take about ten years (Law and Rodway 2013). For Ang Nima “Pala” Sherpa, this was indeed the case. After two years working as a porter, he befriended a guide who later gave him a

position in his trekking company as a trekking cook. After eight more years in this role he obtained a rafting guide license and worked under a different company for seven years before quitting due to poor working conditions. Over the next two decades he worked as a trekking guide across Nepal. Throughout this decades-long trekking career, Pala saw his salary steadily increase until his 12 Rs per day salary as a porter in the 1970s had reached an income that allowed him to retire from the industry and send his children to higher education.

PORTER WORK INCENTIVES

There are several incentives that draw the interest of people to pursue work as porters. Pala Sherpa says that he left his village in Solu for work in Khumbu after he saw how much money his friends were making there as porters. This is a common narrative across the industry; young people, sometimes bored with village life, see portering and the trekking industry as a recipe to get rich quick without attending higher education. This formula has worked out for some who are fortunate enough. World Food Program officer Yangji Sherpa says that both of her parents once worked as porters in the Khumbu region. Her father successfully moved up the labor hierarchy, working as a porter, then cook, then waiter, until finally he was offered a management position at a five-star hotel. Though neither Yangji's mother nor father attended school, they now have sent four children to higher education, no small financial feat. Some who started as porters have even become mountaineering icons. Long Dorjee Sherpa began his career as a trekking porter and gained experience until he had become a relatively famous and wealthy high-altitude worker on Everest expeditions, summiting the mountain fourteen times in his career.

With success stories of wealth and prosperity, the draw of the trekking and mountaineering industry often puts educational pursuits at risk as young people leave their studies to chase promises of short-term wealth. In Khumjung, where many Khumbu children in grades six through ten attend school, one teacher explained how older students would sometimes not return to classes following the October/November holiday break after the Dashain and Tihar festivals. These students would find jobs in the trekking industry during their break and continue to work for the remainder of the trekking season instead of returning to school, forfeiting their education for quick money.

Entire families may even partake in the occupation during trekking seasons. One porter we talked to was carrying supplies alongside his uncle, mother and sister. The whole group was in the process of transporting goods from Jiri to Lukla, a journey that they complete twice per trekking season. Another pair of porters in Namche (uncle and nephew) were engaged in a similar pursuit. During trekking seasons, the pair carries loads between settlements in the Khumbu region, returning to their home village

in Solu after a few months where they trade local harvests of oranges and bananas. One survey taken in Khumbu during the 2013 Fall season found 80% of porters to work as farmers during the off-season, and 15% as full-time students. For many people portering provides a supplemental income to village labor, where they have identities and incomes separate from their roles as Solukhumbu porters.

Yet for some portering and other trekking jobs are an alluring escape from mundane life. One Norbu Sherpa became bored of his desk job lifestyle and quit to enter the trekking industry hierarchy as a cook and porter. His proficiency in English and background in higher education gave him an advantage, and he eventually became a trekking leader for Everest summit expeditions (*Sherpas, the True Heroes of Everest*, 2009). Even Pala Sherpa says that a main reason for his decision to begin work as a porter was the appeal of adventure as an escape from simple village life. Similarly, he notes that one reason for his lengthy career in the mountains was the beautiful scenery he walked through in the Annapurna and Khumbu regions each season.

The porter occupation is not loved by all who work in it. The job carries many hazards and hardships, and is not itself a long-term economic solution, but rather a starting point of advancement within a profitable industry. When asked “why do you work so hard?”, porter Mohan Babu Rai smiled and responded, “so that I can eat good food like dal bhat”. Pressed further, Mohan described that he continues to work in order to save money for his children’s education, as he doesn’t want them to be porters. Another porter in Gokyo responded similarly, sharing his wishes for his children to receive education and have a chance at a better life. One recent survey found that a staggering 94% of porters were not with their jobs as porters (Koirala et al., 2018) perhaps revealing an irony where education is valued only after it is sacrificed.



Right: a porter carries a load near Lukla

PORTER HEALTH AILMENTS

The World Health Organization defines health as the following:

“Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity”

In Solukhumbu, commercial and trekking porters are subject to occupational hazards and social hardships that jeopardize their physical, mental, and social well-being. Ailments to these three areas are numerous.

PHYSICAL WELL-BEING

In an area where sub-zero temperatures are commonplace, landscapes are changed each year by avalanches, and oxygen content is a fraction of concentrations at sea level, it is hardly surprising that porters are subject to many environmental hazards. Indeed, when compared to trekkers and other trekking industry occupations, porters experience the highest diversity and severity of illness (Basnyat and Litch, 1997). Several modes of illness and injury affect the porter’s physical well-being:

Respiratory infections

Respiratory infections are very common among porters. These diseases refer to any number of infectious diseases that affect the respiratory tract, including pneumonia, bronchitis, and the common cold. One study found high altitude pharyngitis and bronchitis to be the most common illness among a group of porters surveyed (Basnyat and Litch, 1997). Doctors at the Khunde and Namche hospitals also said they commonly encounter upper respiratory infections in porters. Dr. Mingma Sherpa, a doctor at the Khunde hospital, said that tonsillitis was incredibly prevalent that season amongst porter patients, and one porter in Gokyo explained to us how “the common cold is our friend until trekking season ends”.

High altitude illness

Altitude illness, or mountain sickness, is another very common disease among Solukhumbu porters. The problem occurs as a result of rapid exposure to low amounts of oxygen. Risk of illness rises steadily after 2500 meters, and symptoms can include headache, vomiting, fatigue and difficulty sleeping. In severe cases the illness may progress into high altitude pulmonary edema (HAPE) and/or high altitude cerebral edema (HACE), where the lungs and brain are impaired and there is a serious life threat. Both mild and severe forms of altitude illness were common among porters at the time of this study; during an interview at Lukla Hospital, two porters were in treatment for HACE. Doctors at hospitals in Khunde and Namche also reported HAPE and AMS (acute mountain sickness, a mild form of high altitude illness) as

common porter ailments during the current season. Helicopter pilot Captain Prajol Chettri says that most of the porter evacuations he runs are due to complications involving high altitude illness, and almost every porter interviewed had a story of them or a friend developing altitude illness.

Frostbite

Frostbite is also a geographical reality in high elevations of Solukhumbu. Though the problem certainly exists in the region, it is significantly less prevalent among porters compared to other ailments such as high altitude illness and respiratory infections, and doctors at the Lukla and Khunde hospitals and at the IPPG rescue post in Machhermo said that they see frost bitten patients only occasionally. Dr. Mingma Sherpa at Khunde Hospital says she sees less frostbite now than at the beginning of her career (she has worked at Khunde for three years) and believes this may be due to better awareness of frostbite prevention.

Snowblindness

Snowblindness occurs as a result of prolonged UV light exposure to the eyes due to sunlight reflection off bright white snow. The painful problem can be avoided by wearing sunglasses. This injury was not very common among porters according to the care centers we visited. Yangji Sherpa said one time one of her friends suffered from snowblindness during a trek around the Everest Base Camp area. Waking up before sunrise to start walking, he forgot to put on his sunglasses and later suffered the consequences.



Above: Frostbite usually reveals itself as woody or black patches of skin located on the fingertips or face

Right: Sunglasses are an effective measure of preventing snowblindness



Hypothermia

The elevation of the Khumbu region places porters in the region at increased risk for hypothermia, especially at night and when storms suddenly catch trekking teams off-guard and hours from a nearby settlement. No porters interviewed said they had experienced hypothermia, though some mentioned feeling cold at times during their treks, and many trekkers and care providers shared personal accounts where they had witnessed fatigued porters in cold conditions. Yangji Sherpa was walking over Renjo la Pass during a trek in 2018 where one lone porter was found sick and tired and was guided to a settlement with the help of Yangji and her companions. Yangji says she believes the porter might have died if she and her group did not intervene, as the closest settlement was hours away and a storm later rolled through the area.

Accidents and trauma

While avalanches and crevices are certainly common hazards for high altitude workers, these problems are not as worrisome for the lower altitude porters. Fractures and wounds were not very common problems according to doctors at the care centers visited, though Dr. Mingma Sherpa at the Khunde Hospital said that construction-related trauma was more common during the off-season. Just as many lowland people find work as porters during the trekking season, groups of people from similar areas often move to Solukhumbu during the off season to work on construction projects.

Joint pain and chronic disability

The work of a porter puts enormous strain on the body, and after years of continuous load carrying over rugged terrain many workers develop chronic arthritis and pain that disables them from enjoying healthy lives. A healthcare assistant at the Nachipang healthpost just north of Lukla said that the most common complaint he hears from porters is joint pain. Despite the method porters use to carry their gear – a *namlo* strap across the forehead – a Porters' Progress UK member said that there are few back and neck problems that result from long-term work as a porter, and that knee joint pain is much more common (Law and Rodway, 2013). Yangji Sherpa's mother developed varicose veins in her legs (a condition aggravated by constant pressure that leads to chronic pain) and later had surgery, likely to alleviate pain. She has had difficulty walking ever since. Kami Sherpa, a school teacher with more than 50 years of experience in the mountaineering industry currently lives with a bad leg mangled from an accident in an ice fall near the Everest base camp. These examples clearly suggest that portering has long term health implications.

MENTAL AND SOCIAL WELL-BEING

Mental and social health of porters is not as traceable to specific geographic hazards or disease, but rather involves complicated structures that have evolved with the changing aspects of Solukhumbu society. Ailments to these areas of health are more difficult to heal, and many aspects of the porter occupation are in direct conflict with porter well-being.

Traumatic experiences and mental health

Many of the most traumatic accounts of sudden death and disaster occur among high altitude workers, where avalanches, falls, and high altitude illness are extremely threatening. For these workers, death of a friend or family member can be happenstance, and the financial dependence of the worker on his high-paying job at high altitude could prevent him from quitting the job for a safer occupation.

Though low altitude porters might not experience these risks at the same level, we had reason to believe that the effect of traumatic episodes on the mental well-being of trekking and commercial porters was significant. Dr. Nicolas Calzoni, a volunteer doctor at the Lukla Hospital, said that he sees many porters who become so traumatized by severe illness – usually cases of severe mountain sickness – that after recovering they do not return to work that season. Many porters we talked to on the trail had stories of witnessing friends nearly perishing to altitude sickness or the cold, highlighting the dangers of this work and the associated mental health consequences they can lead to.

Social Isolation

Porters are often of a different ethnicity than the indigenous people to Khumbu who are mostly Sherpa and Rai. Though we noticed ethnic coexistence and harmony in Solukhumbu, some groups have been victim to social despair due to their ethnic status. The Khaling people (a subset of the Rai ethnic group) experience social isolation within their own homeland; with ancestry in areas of Solukhumbu not heavily impacted by tourism, the Khalings have not seen the economic development that the Sherpas have experienced and have dependency on the latter for work, becoming humiliated as “slaves in their own homeland” according to one man (Frydenlund, 2017). Combined with their low labor status as porters, many workers are victim to social abuse that manifests in segregation and discrimination. Sometimes guides would take a porter’s

“Porter” connotations

The term “porter” carries a complicated set of connotations with it. Many people we talked to defined themselves as a “porter”, though some individuals we came across were more hesitant to use this label. I was quickly corrected by my coresearcher after calling a Nepali hotel a “porter hotel”, as that term apparently carried a rude connotation. Some porters return home to show their friends and family they made as a “guide”. The term “trekking assistant” is also occasionally used in the region instead.

tips away that he had earned from a foreigner, an abuse that many believe is due to ethnic and labor discrimination (Frydenlund, 2017). In other instances, porters would be dismissed from the trek the day before reaching the destination, prohibiting any tips that the porters might receive and maximizing the money for the guides and leaders of the trek. Anthropologist David Holmberg has described the labor exploitation that occurs via employment of naïve porters from uneducated communities, resulting in underpaid, underfed and underequipped porters. Holmberg also says that deaths of porters almost always proceed in silence, where they succumb to exposure during storms, never to be named or reported (Ortner, 1999).

Stereotyping of porters is common. Since Pala Sherpa's days as a porter in the 1970s, where he says porters were excluded from guesthouses "because they ate too much dal bhat", views of porters as dirty, wasteful, obnoxious, troublesome drinkers and gamblers are common across Solukhumbu. Porters are segregated from the rest of a trekking group, and have historically slept, eaten, and even walked separately from the rest of the party. The phrase "out of sight, out of mind" is a sad reality for porters in the trekking industry. Many trekking companies praised for their progressive treatment of porters are breaking these barriers, but even so the segregation seems ingrained. We noticed one REI trekking group where porters and kitchen staff seemed to be more acknowledged by other members of the party, though they were still served food only after the trekkers and guide had finished eating. One porter we talked to even explained how the guides in his company wouldn't let him talk to foreign trekkers, as they believed he would make them unhappy by asking for money and donations of clothing.

This is not all to say that dominant economic groups like the Sherpa are apathetic and greedy moneygrubbers. Quite the opposite, Sherpas are widely known for their acts of generosity and selflessness, and for the majority of our field research we noticed Rai, Tamang and Sherpa people in healthy coexistence walking on the trail, conversing in lodges, and intermingling in porter residences.



Above: Carrying supplies to Namche

IMPEDIMENTS TO PORTER HEALTH

The porter is victim to many ailments regarding physical, mental and social well-being. Unfortunately, many aspects of the daily life of the Solukhumbu porter contribute to these problems and create more hardship within the occupation.

POOR EQUIPMENT

Soon after experiencing Solukhumbu for the first time it becomes clear that what might be necessary trekking equipment elsewhere in the world is not a reality for many of the local people. Footwear, jackets, pants, hats, sunglasses and sleeping bags are all strongly recommended for anyone visiting the region, yet few porters have access to all these items. Many porters we passed did have boots, though some of these were in obvious disrepair, and many porters we saw wore only flipflops.



Left: "Suggested gear list for Everest base camp trek" (photo courtesy of explorehimalaya.com)

Below: Porter equipment often lacks adequate footwear and cold weather clothing (photo courtesy of livingbiggerwithcolostomy.com)



In some trekking locations, more specialized equipment is needed. When traveling over high elevation passes where snow threatens even the most sure-footed trekker, crampons are a necessary addition in order to navigate the loose terrain.

Yet many porters lack these; Yangji Sherpa witnessed a porter struggling to navigate the snowy Cho la Pass on one occasion, and one porter Mohan Rai says that he has crossed three passes – and returned back over them – without using special equipment like crampons. Many people interviewed, porters and non-porters alike, thought that the lack of adequate equipment was an issue of affordability, not awareness.

HEAVY LOAD CARRYING

Despite guidelines of weight regulation, many porters carry mountains of supplies and gear that seem almost superhuman to the casual observer. The realities of load carrying are different for trekking and commercial porters. For commercial porters, payment is related to the amount of weight carried. This has created a financial incentive, resulting in spectacular towers of goods being strapped onto backs, often hiding the burdened porter underneath hundreds of pounds of goods. It is not uncommon for these porters to carry their bodyweight; one study found that the average load of porters surveyed was 89% of their bodyweight (Basnyat and Schepens, 2001). Many of the porters we saw were indeed carrying staggering weights. One man was carrying 90 kilograms – 198 pounds – of meat from Namche to Dingboche for 100 Ns per kilogram. The trip up takes him two days, and he says that he repeats the journey each week for the entire trekking season. All commercial porters we talked to were engaged in similar arrangements, paid per kilogram transported and often carrying weights exceeding 60 kilograms. Some of the most stunning shipments we observed on the backs of porters included 17 cases of San Miguel beer, 5 empty fuel canisters (each weighing 14.2 kilograms), a door, and a tower of white sacks of rice totaling 110 kilograms (see title page).



Above: Five fuel cannisters weighing 14.2 kg each – a heavy load to carry uphill

The amount weight carried by trekking porters is subject to different influencers. Trekking companies and other interested groups have imposed guidelines on the appropriate weights for portering. A generally accepted amount of weight to be carried is around 30 kilograms. However, enforcement of these guidelines seems almost nonexistent, and weight regulation is usually left to a trekking company's discretion. As opposed to commercial porters incentivized to increase weight carried to maximize payment, trekking porters are usually paid a daily wage. However, other financial incentives are present in the industry that complicate matters. Many trekking companies offer porters extra money for carrying double quantities of weight. This can financially benefit both the trekking company and porter – where a trekking company might pay two porters 1500 Rs per day, by employing only one porter to carry a double load the company pay one porter a bonus income of 2500 Rs per day, ultimately saving money. Many porters we saw were carrying loads around 20 to 30 kilograms, though some we talked to said they were carrying weights close to 50 kilograms.

LACK OF REST

The work of a porter is an exhausting job, but unfortunately the current sleeping arrangements for porters do not all provide adequate comfort. Unlike guides and other trekking workers, porters are segregated from lodges and must find alternate places to sleep. The saddest example of inadequate shelter can be seen when passing by the occasional trail-side caves, where porters may sleep when no other accommodations are available. These caves lack warmth and comfort and are obvious examples of porter deprivation. Fortunately, through the works of groups such as the International Porter Protection Group (IPPG) and other NGOs and community members, these caves are becoming less used as porters move into Nepali hotels and porter shelters (see Facilitators to Porter Health). Nonetheless, we passed by two caves during our research that appeared to be in recent use.



Left: Not quite a cave, one of the structures where porters sleep on the way to Namche

MALNUTRITION

The porter occupation also sees a neglect of nutritional needs. The remoteness and lack of infrastructure has made food expensive in Solukhumbu, and prices for a meal steadily increase as one travels farther from Lukla. Although porters are given discounted prices in many locations, we found that in Lukla, dal bhat cost 250 Rs for porters and in Machhermo the same meal costs 400 Rs. Most trekking porters we talked to earned around 1200 – 1500 Rs a day (though some made only 800 Rs). Meals and accommodation are often not included in porters' contracts, meaning that a porter must spend most of their earnings on food. Sometimes porters are not able to afford three meals a day. In remote areas such as Gokyo, Machhermo and Lobuche (where a meal of dal bhat costs 500 Rs according to one porter), a daily income of 800 Rs would barely cover two meals. Some porters we talked to said that they can only afford to eat two meals each day.



Above: Dal bhat contains enough nutritional benefits to supply the consumer with hours of power

ABANDONMENT

There are many stories of porters being abandoned on the trail. Sometimes a porter will be paid and sent away from the trekking group after they are no longer needed, such as when their load is used up. Unfortunately, we heard many stories where sick or injured porters were paid off and abandoned in a similar fashion, left to find treatment by themselves. Mohan Rai was at Lobuche for the first time in his career when he developed a headache due to the high altitude. Other porters in the group took up his load, and Mohan was paid for his work up to that day and sent back down the trail alone. Luckily Mohan safely made it to a settlement, but his



experience is not unusual amongst Solukhumbu porters. Tragic examples of abandonment leading to porter death are all too common and have become the foundations of many groups focused on improving porter welfare.

Left: The rescue post in Machhermo managed by IPPG, a group that began due to a tragic incident involving porter abandonment

LACK OF INSURANCE

Despite the high levels of occupational hazards they face, many porters in Solukhumbu do not receive insurance. Trekking porters, who often work under a company, might receive insurance but provision is not guaranteed. At the IPPG rescue post in Machhermo, one trekker expressed skepticism at his company's policy of porter insurance. He said he wasn't confident that the porters in his group were actually provided with insurance, as one of the workers was switched out with another porter last minute. Although the Nepal government requires trekking companies to provide insurance for all their employees, enforcement is nonexistent and a porter's insurance coverage relies solely on the decisions made by their respective company. Regardless, the care providers across Solukhumbu that we talked to all said that most or all the porters they treated arrived without insurance.

For those with it, the effectiveness of insurance is often lacking, as porters usually have little knowledge of how to navigate paperwork and claim reimbursement. Many trekking porters that are supplied with insurance by their companies are not familiar with the process of reporting and documenting their illness or injury, and companies seldom help their employees navigate the insurance process. Many porters also lack education, resulting in a shared view of paperwork and insurance as 'too complicated', and not for them.

LACK OF EDUCATION

Many porters enter the occupation with limited education, and some don't attend school at all. Lack of knowledge pertaining to high altitude illness prevention and treatment is a dangerous reality for porter health in the region. Surveys on porter perceptions of high altitude illness have disagreed on the levels of porter knowledge on these topics, with some porter populations displaying considerable knowledge about altitude sickness (Newcomb et al., 2011). and other populations apparently more ignorant of basic facts regarding altitude illness prevention and treatment (Korjala et al., 2018). The porters that we came across seemed to have a basic awareness of altitude illness. One porter shared with us that he knew that after mild symptoms like headache he should rest a day or two.

Education in other areas of first aid, English, and "eco-trekking"/environmental awareness are all important for sustainable tourism growth and for the advancement of a porter within the industry, though these classes often require money for enrollment and are not accessible for all porters. Babu Tamang, a porter with twenty years of experience, explained to us how difficult it was for him to improve his career with his level of education. Having never attended school, he had no English speaking ability and found

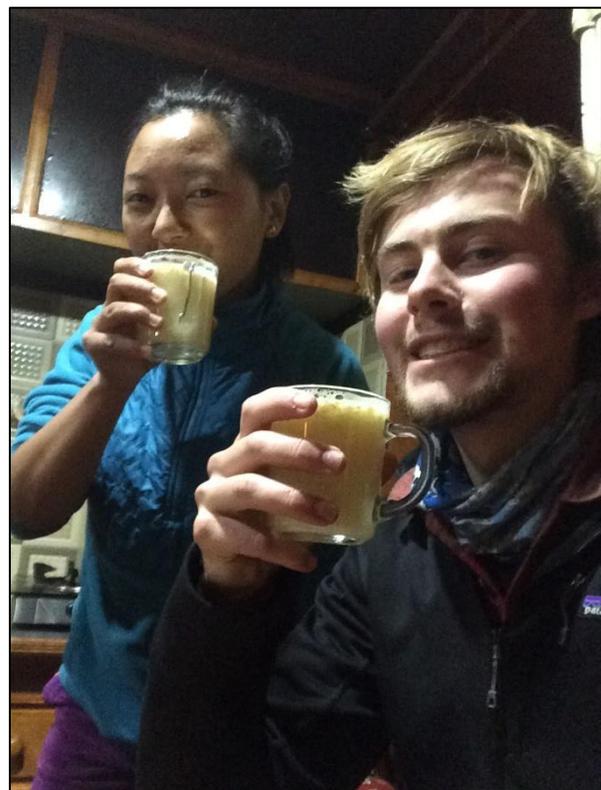
it difficult to progress in his company. Nonetheless, Babu seemed proud when he told us that he had never gotten seriously sick during his long experience as a porter, told us that he “won’t carry more than 30 kilograms because he doesn’t want to get ill”.

Knowledge about medications is also lacking. Ang Phurwa Sherpa, a dental assistant at the Lukla Hospital, explained that many porters buy medicine from street shops for generic pain problems without understanding the full intentions of the medicine. A shop might sell a porter complaining of stomach pain an antibiotic when the actual problem is a completely different disease like mountain sickness. Additionally, after obtaining prescriptions from a care center many porters are unaware of the importance of finishing the intended doses, which is necessary for adequately treating the disease and reducing antibiotic resistance, an impending global threat.

HARMFUL LIFESTYLES

Many aspects of the porter lifestyle are unhealthy. 11% of the youth aged 13-17 and 36% of adults aged 30-69 in Nepal smoke cigarettes according to the WHO 2018 Tobacco Factsheet, and many porters we observed would lite up a cigarette during a rest on the side of the trail. Smoking is seen by some as a mitigator to altitude sickness symptoms (probably due to smokers’ familiarity with being hypoxic). Yet high altitude pulmonary edema (HAPE) is more severe for the habitual smoker, whos already damaged lungs are subject to even more stress after complications worsen in altitude.

Alcohol is another common drug among the porters of Solukhumbu. Homemade brews of chang and rakshi circulate porter living areas where they can be cheaply bought, often at prices similar to that of a cup of black tea. During interviews at various Nepali Hotels we observed many porters drinking alcohol, some of them visibly drunk. In one instance we saw two porters drinking chang at 10:00am. Porters are not the only population in Khumbu drinking alcohol – many lodge owners, guides, and



Left: Chang is a popular local drink often made from fermented rice or barley

researchers also enjoy a drink or two. However, individuals working as porters may be at higher risk to alcohol use. According to the International Porter Protection Group website, porters may resort to gambling and binge drinking to cope with homesickness. Yangji Sherpa shared one story where her mother, a porter, drank chang in Monjo before finishing the 600 meter uphill journey to Lukla in order to dull the pain she felt in her knees.

Porter Death and Disability

Immediate causes	Accidents and trauma	Frostbite, snow blindness, hypothermia	Respiratory infection
	HAI (high altitude illness)	Chronic joint pain	
Underlying causes	Malnutrition	Lack of rest	Abandonment
	Heavy load carrying	Harmful lifestyle	Poor equipment
			Lack of insurance
Basic causes	Lack of education	Economic incentives	Social segregation
	Unregulated trekking companies	Lack of awareness regarding porter wellbeing	

The causes of porter death and disability in the Khumbu region

FACILITATORS TO PORTER HEALTH

Through the actions of government, international, and local aid, many developments have been made to help facilitate the improvement of porter health in the Solukhumbu region. These measures have had varying degrees of effectiveness but nonetheless represent positive change to porter well-being.

CARE CENTERS

Many hospitals, health clinics and rescue posts in Solukhumbu offer their services to ill and injured porters. Some of these care centers are staffed by local professionals, others by international volunteers. All the care centers we visited that could diagnose patients (meaning they had a doctor on staff) had fees ranging from 20 Rs to 100 Rs for porter checkups, and many provided medications free of charge. Care centers are located in many, but not all settlements in the Khumbu region, and despite the long and strenuous walks separating towns, healthcare resources seemed generally available in the area we traveled between Lukla and Gokyo. Hours of operation were variable across the care centers; the hospitals in Lukla and Namche had larger staffs and 24 hour service, while smaller health posts and clinics appeared to close more often. The emergency response capabilities of the region rely on a helicopter armada. Hours would seldom pass without spotting a helicopter overhead, and most settlements we walked through had one or two helipads.



Above: The hospital in Lukla

MUNICIPALITY INSURANCE PROGRAM

A recent development has been underway through the efforts of the local government, specifically at the hands of the Khumbu Pasang Lhamo Rural Municipality. This group oversees development in the region, and has a role in road construction, community healthcare and guide licensing, among other projects. One recent development has been the introduction of an insurance program for guides and porters, introduced at the beginning of the 2018 Fall trekking season. After paying a small fee (100 Rs for porters, 250 Rs for assistant guides and 500 Rs for guides), trekking workers can sign up for a municipality-issued ID card at an office in Lukla. The only paperwork needed is a government citizenship card, and after obtaining an ID card porters and guides have access to reimbursement of up to 50,000 Rs in medical insurance. Signing up also includes a 100,000 Rs life insurance package, though it was unclear to us exactly how the money would reach a deceased worker's family under this program. Commercial porters are not allowed to sign up for the program, and the insurance expires after one year, meaning that workers must renew their ID card every other season. Tashi Rai, who works for the municipality and issues the ID cards says that during the three months that the program has run, 300-400 workers have signed up, and only once has someone come to him for reimbursement through the medical insurance.

The municipality insurance program appears to be a fantastic resource for porters who don't receive insurance from their trekking company, but unfortunately realities in the Solukhumbu trekking industry have limited the widespread adoption of this service. Though the program is relatively new, almost all of the porters and guides we talked to were unaware of the ID cards and insurance. The program is advertised on local radio and is mentioned on the municipality's Facebook page, though most of the porters who had heard about the program knew about it through a friend.

When we explained the program to porters, additional realities were uncovered that suggested that insurance provision for porters might be a challenging goal. Many uneducated porters hear about the ID card and believe that the process of signing up – which takes about two to three minutes – must be lengthy and confusing. Some porters told us that they felt too busy with work to sign up. Mohan Babu Rai is one porter who spends the majority of his season traveling between Namche and Machhermo, far from the ID card registration center in Lukla. Furthermore, although the only personal identification

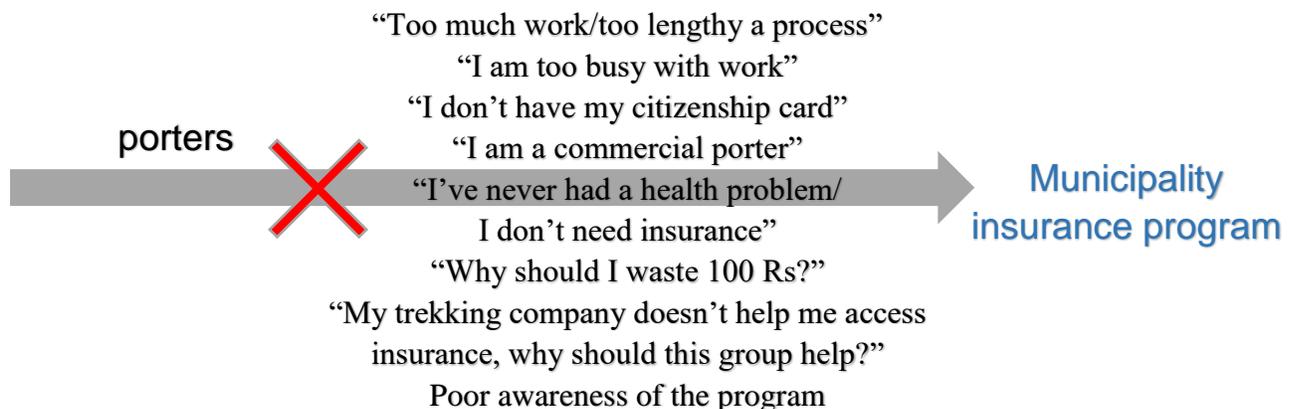


Above: The municipality sponsored ID cards allow those who possess one access to insurance and equipment rentals at the clothing center in Lukla

needed for signing up is a government citizenship card, this item is not always in a worker’s possession. Many people told us that they leave their citizenship card at home when they travel to Solukhumbu for seasonal work.

A porter with 20 years of experience, Babu Tamang told us that he didn’t need insurance as he has never gotten sick during work. When questioned about what he would do if he ever did become ill, he told us that he would still forgo the insurance as he thought that the program would be unable to help him navigate the insurance process. We told Babu that the municipality program was a straight-forward system, and that all he would have to do to use his insurance would be to bring a receipt to the Lukla program office for reimbursement, but Babu insisted that the insurance would still be out of reach for his access and that the municipality would not help him. Having worked for the same trekking company for 20 years, Babu told us that his company never helps his coworkers navigate the insurance process. He said that he believed the municipality program would be similarly useless as an insurance provider and that it would be silly to waste 100 Ns on an ID card.

All of these sentiments and realities can be thought of as barriers to access of insurance:



CLOTHING CENTERS

To improve the lack of equipment among porters, clothing centers have been made available to Solukhumbu porters. These buildings are filled with stocks of footwear, jackets, pants, sleeping bags, sunglasses and hats, and allow porters to rent gear for a trek, often at little or no cost. Two clothing centers are available for use by Solukhumbu porters.

The Lukla clothing center began accumulating equipment years ago under the Porters' Progress UK NGO but now is run by the local Khumbu Pasang Lhamo Rural Municipality. One employee runs the clothing center which contains stocks of sleeping bags, pants, jackets and sunglasses. Access to the center requires a municipality-issued ID card, and after signing up all equipment is free for use, though users must wash all clothing and sleeping bags before they return items, else they pay a laundry fee. The center is open from 6 am to 6 pm.



Above: Tashi Rai poses in the Lukla clothing center. Coresearcher Yangji Sherpa smiles at the wall

There are currently no rules in place for lost or damaged gear, though the center employee, Tashi Rai, said that in the eight months that the center has been running no one has abused or stolen any gear. There are no boots in the clothing center, a notable absence as footwear is an important and often-lacking gear item for porters. Tashi thought that next year they

will have boots – the municipality orders new equipment for the center during the off-seasons. It was unclear whether or not the center accepted used gear from tourists to be used as had been the case under its old management. We noticed much of the equipment in the center to be unwrapped, and it seemed that the clothing center could have a surplus of clothes for its current level of users, (one to three porters a day according to Tashi). However, this could also be due to our research taking place during the end of the trekking season. As with the municipality insurance program, many people we talked to had no idea the clothing center existed, though after a few more seasons of growing pains advertisements on the radio and on Facebook could spread knowledge of the clothing center around the area.

A second clothing center in Kathmandu is also available for porter use. The center has been in operation since 2009 and one can find it nestled in one of the side streets of Thamel. It is managed by Kathmandu Environmental Education Project (KEEP), an NGO focused on sustainable tourism growth in

Nepal. A greater diversity of equipment is available for porter use at the clothing center, including boots, gloves, hats and socks in addition to jackets, pants, sleeping bags and sunglasses.

While the Lukla clothing center caters more to individual porters who sign up for an ID card, the KEEP center in Kathmandu operates more directly with trekking companies who contact KEEP and request equipment for their porters. After paying a 5000 Rs security deposit all equipment is free for use, the deposit returned after the gear is returned. The role of trekking companies as the direct users of the center means that porters who work under a company that doesn't utilize the clothing center might not be able to utilize the available equipment. Nonetheless, the clothing center is also utilized by some freelance porters who work without trekking company oversight and borrow equipment without their help.



Above: Sleeping bags, jackets and pants are all available for use at the Lukla clothing center. Many of these items remain in their original packaging, however

The gear stock at the Kathmandu clothing center is dependent on the generosity of donors. Trekkers have the option of dropping off their used equipment at the center before flying home, and several international companies ship supplies to the center as well. There are some obstacles KEEP has experienced in acquiring enough gear and the Kathmandu group has frequently found their stock of gear to limit the amount of porters they can serve. Equipment is not immortal and succumbs to heavy wear and tear by its users and KEEP told us that lately much gear has needed to be replaced after a few years of circulation in the clothing center. Nepal also does not allow used goods to be imported into the country, a policy that limits the equipment donations KEEP may receive. A couple years ago one company sent a large shipment of used boots to KEEP which have been sitting at the border ever since. Despite it all, as of the end of the 2017 Fall trekking season the KEEP clothing center has benefitted 3622 porters and 375 companies since its start in 2009.

KEEP mentioned plans of starting a second clothing center in Lukla in the future, though at this point the exact date of the project's start remains unknown.

NEPALI HOTELS AND PORTER SHELTERS

Developments around Solukhumbu settlements have created more available accommodations for porters. Nepali hotels are cozy residences that closely resemble the lodges and guesthouses used by trekkers but instead cater to porters. We encountered these places in almost every settlement we visited. A small tv was usually on in a corner of a main kitchen/dining room, showing a game of cricket or American WWE. The smell of rakshi and chang in the hotels was a common experience, and an owner would usually cater to groups of family members and porters huddled around a wood stove, preparing drinks and dal bhat for the guests. These establishments provide porters with a place to stay for the cost of a meal, which is usually given at a discount price compared to other restaurants. The sleeping arrangements we saw were usually single rooms ranging in size and lined with mattresses and blankets.

Porter shelters are another option for accommodation. These buildings, usually composed of a kitchen and a large mattress-filled room for sleeping, have been built over the last decade or two by the likes of international and local groups. The shelters we saw can often fit over 100 porters, though usually this number included floor space. We visited porter shelters in Namche, Machhermo and Gokyo, and we later learned that these establishments were relatively common in Khumbu and available to the high volumes of porters in the Lobuche and Gorak Shep settlements traveling to Everest base camp.



Above: The porter shelter in Namche has 16 beds that can each have space for three people. The owner of the shelter building says the room can fit 130 porters.

Nepali hotels and porter shelters certainly provide a better alternative to porters than sleeping in caves, though conditions in these establishments are not always ideal. The sleeping areas in Nepali hotels and porter shelters can become very crowded, resulting in unhealthy living space and proliferation of communicable disease. During peak trekking season this problem is most common; at the Gokyo shelter, IPPG staff (who used to manage the shelter and operate a neighboring rescue post) mention that they often hear loud coughing from within. There is “room” in the Gokyo shelter for 60 porters, (the owner told us that they can usually fit 80) but we heard stories from several porters about there frequently being even higher numbers of porters, some estimates reaching 200. With such extreme overcrowding in close quarters, it is hardly surprising that contagious respiratory infections are one of the most common sicknesses for Solukhumbu porters.

Another consequence of overcrowding in the Nepali hotels and porter shelters is the real scenario of the residences running out of room, leaving porters stranded without any nearby options of accommodation. One porter we came across mentioned that during one trek the porter shelter at Gorak Shep was full, so he had to travel to Pheriche (a five hour walk away for porters) to find a place to sleep before returning in the morning. Other porters also agreed that the Lobuche and Gorak Shep porter shelters were particularly limited in capacity and often led to porters seeking shelter elsewhere. In Gokyo we also heard that this was sometimes a reality, though the close proximity of Machhermo (a one or two hour walk away) made this problem less of an inconvenience.

The existence of porter shelters might be somewhat controversial, as some porters see them as direct contributors to social segregation. One porter said that shelters have cemented the identity of porters as a dominated group, explaining that “we aren’t allowed in the lodge, we sleep in the porter shelter like animals” (Frydenlund, 2017). Nevertheless, we were pleasantly surprised to find that the porter shelter in Machhermo was no longer in use, as porters in the settlement now all sleep in Nepali hotels or even in trekking lodges when there is available room. This trend is encouraging. Though it might take years, if porter sleeping arrangements steadily improve across Khumbu, porter living conditions would see immense improvement from trail-side caves.

PORTER EDUCATION

To increase altitude illness awareness, provide porters with tools to advance their career, and benefit the growing tourism industry as a whole, several methods are in place to facilitate porter education. Several care centers provide patients with altitude education through informative brochures and guidebooks, increasing the knowledge of prevention and treatment of illness among porter groups.

The IPPG staff hands out free altitude sickness guidebooks to the porters they encounter, which are available in English and Nepali and produced by the Medex organization.

The local municipality office provides resources for guide licensing and works with groups like the Nepal Mountain Academy to help facilitate the training of guides. However, the classes required to become a guide is often expensive when compared to a porter income of 1500 Rs per day, and the registration fee to obtain the final license costs 1000 Rs.

KEEP has a large role in facilitating porter education. Once per year the group puts on a Porter Education Workshop in a “hotspot” region for porter populations, usually in a remote location where the trekking industry has led to many people working locally as porters. These workshops have been in session since 2011 and educate porters in a variety of topics including training in insurance handling, eco trekking, first aid, accessing the Kathmandu clothing center, progression through the tourism industry and labor rights relating to safety, health and hygiene. Porters are given a stipend for their participation (the exact sum depends on the location of the workshop) as attending the two-day event means that the porter would miss out on any income from work during that time. The workshop held in Tablejung during July 2018 saw 67 participants and included lectures, group discussions, practical scenarios, and question/answer sessions. Similar numbers have attended during past years. Some trekking companies actively send their porters to attend the workshop, meaning that like KEEP’s clothing center, the ability of porters to access helpful resources may often depend on their company’s participation.

Right: Volunteer doctors at the IPPG rescue post give an informational talk to a group of trekkers



TREKKER AWARENESS

Spreading awareness of porter welfare among trekkers has been a common tactic by groups to benefit porters. The IPPG rescue post in Machhermo hosts a daily informational talk that informs visitors on porter realities and altitude sickness, and according to the volunteers of the 2018 Fall season there has never been a day without an audience, and the small common room where the presentation is held is frequently crowded with dozens of interested trekkers. The IPPG has five ethical guidelines regarding appropriate treatment of trekking porters:

1. Clothing appropriate to season and altitude must be provided to porters for protection from cold, rain and snow. This may mean: windproof jacket and trousers, fleece jacket, long johns, suitable footwear (leather boots in snow), socks, hat, gloves and sunglasses.
2. Above the tree line porters should have a dedicated shelter, either a room in a lodge or a tent (the trekkers' mess tent is no good as it is not available till late evening), a sleeping pad and a blanket (or sleeping bag). They should be provided with food and warm drinks, or cooking equipment and fuel.
3. Porters should be provided with the same standard of medical care as you would expect for yourself, and life insurance.
4. Porters should not be paid off because of illness/injury without the leader or the trekkers assessing their condition carefully. The person in charge of the porters (sirdar) must let their trek leader or the trekkers know if a sick porter is about to be paid off. Failure to do this has resulted in many deaths. Sick/injured porters should never be sent down alone, but with someone who speaks their language and understands their problem, along with a letter describing their complaint. Sufficient funds should be provided to cover cost of rescue and treatment.
5. No porter should be asked to carry a load that is too heavy for their physical abilities (maximum: 20 kg on Kilimanjaro, 25 kg in Peru and Pakistan, 30 kg in Nepal). Weight limits may need to be adjusted for altitude, trail and weather conditions; experience is needed to make this decision. Child porters should not be employed.

Though these talks may occur after a trekker has hired a trekking agency and completed the majority of their trek, groups like the IPPG hope that awareness on issues of porter welfare may lead trekkers to make well informed choices in the future and share the knowledge with friends.

KEEP shares a similar set of guidelines with its visitors and has a year-round travelers information center next to their clothing center and office in Thamel. Numerous logbooks keep up-to-date information for trekking tips around multiple areas of Nepal, and a free documentary video made in conjunction with BBC educates viewers about porters every day at 2 pm.

ALTRUISM

Perhaps the most common health facilitator in Solukhumbu that we noticed were acts of altruism. Integrity among communities and selflessness among individuals seemed to exist as some of the most useful tools to improve porter and overall health in the region. In many care centers, medications were provided at little to no cost to porters, but during cases when treatment costs were greater than the porter's means to pay, hospitals and rescue posts would frequently use funds from donations and savings to handle the treatment. At the Lukla Hospital, Ang Phurwa Sherpa told us that a porter had come in with a mangled hand that had been crushed during an accident. The hospital paid for all 22 days of treatment and food for the porter. We heard stories of entire communities pooling funds to cover expensive evacuations. Years ago in Namche, a baby became sick with pneumonia and urgently needed evacuation to a facility that could offer higher levels of care – a helicopter ride costing 60,000 Rs. Fortunately, through the generosity of the community a fund was raised, the baby was transported and later recovered. Asked if a similar situation would have occurred if the patient was a porter, health assistant Pemdike Sherpa said the thought so. Helicopter pilots sometimes even transport sick porters for free if they are sick enough. According to pilot Prajol Chettri, if a porter is in a state where evacuation is a life or death matter, the issue of money is overridden in order to save a life.

Right: Helicopter evacuations are common for sick trekkers and porters alike (photo courtesy of fishtailair.com)



CONCLUSION

MANY PLAYERS, ONE GOAL

Many different groups are all working to improve porter well-being in Solukhumbu through a myriad of methods, though they sometimes seem to operate in isolation of one another, all working independently to achieve the same goal. In a place like Nepal where the geography is extremely rugged and international groups frequently step in to replace the lacking governmental centralization as seen in other parts of the world, it is difficult to coordinate efforts between so many actors. Uncoordinated action might be better than no action, but there are some problems that have resulted from a lack of collective communication. Across many different groups, almost everyone we talked to besides the municipality staff had no awareness of the local clothing centers or insurance program. Some websites of current NGOs are out of date, mentioning “updates” of porter shelter construction and clothing center developments that occurred almost a decade ago in some cases. Continuous communication and active updates to the current status of developments in Solukhumbu would have a large benefit.

However, sometimes joint efforts between groups do take place effectively. The IPPG worked alongside other organizations (Community Action Nepal, the Kumbila Buffer Zone Committee, local groups and others) successfully constructed porter shelters in Machhermo, Gokyo and Gorak Shep. KEEP receives much needed funding and equipment from international donors such as Kathmandu New Zealand, Porteurs d’Avenir, and Globo Trek that keep its clothing center and porter workshops running.

MISINFORMATION AND REALITY

Misinformation was also a common theme of this study. Many people we talked to described porters in ways that fit the stereotype of dirty, loud, alcoholic gamblers, yet many porters we saw choose tea over chang, are taking classes, and have mature plans to become guides. We also found that there was a widely held belief that frostbite was a major problem for porters in the area, but according to all care providers we visited porters almost never sought out treatment for frostbite. Rather, respiratory infections and altitude sickness were the most common ailments to porter health.

Understanding the realities porters face and the perceptions they hold is critical. In 2012, Porters’ Progress UK surveyed porters in many popular trekking regions including Solukhumbu and found that many desire trainings in English and other areas that facilitate career advancement. Another survey was taken last year that looked at porters’ level of knowledge regarding altitude illness (Koriala et. al, 2018).

Surveys like these would be of great use to help develop the interventions that effectively consider realities and perceptions among porter populations.

ECONOMIC FACTORS

Economic factors underlie many aspects of porter well-being and are a large part of the structures impacting Solukhumbu society. There are many repercussions to porter health that the economic landscape is partly responsible for:

- Just as porters might take additional weight to make extra cash, trekking companies sometimes give porters double weight to save money.
- Local inflation is tied to high food prices and malnutrition.
- There is a heavy reliance on tips from foreigners in the industry which can range in amount and frequency, meaning that the income of a porter can be very unstable.
- Child labor is a reality in Solukhumbu – we saw one porter who was only twelve years old.
- The nature of portering work necessitates being physically healthy in order to carry heavy loads, and many porters are slow to complain about illness for fear of missing work opportunities or even being reprimanded by their trekking company. Health becomes sacrificed for profit.
- Interventions that might regulate the trekking industry might also conflict with a trekking company's agenda, and actions taken by an international group like IPPG that anger local groups might add further complexity to pursuits of porter health improvement.

INFLUENCE OF TREKKING COMPANIES

Trekking companies have a large influence over the porters they employ. Many aspects of health – insurance, weight regulation, income, sleeping arrangements – are all usually left to the discretion of a trekking company. With so much influence in the trekking industry, choosing a responsible and fair trekking company goes a long way in demonstrating support for positive development for porter health and the tourism industry in general. Some companies are certified in environmentally-friendly “eco-trekking”, and others actively send their workers to classes where they can advance their education and career. KEEP has a list of “Eco-Members”, trekking companies that use their clothing center and attend the annual porter education workshops. The IPPG stresses the importance of researching trekking companies before a trek to learn if they follow ethical considerations for porters.

IN SUM

The status of porter health in the Khumbu region is clearly a complicated issue with many geographical, economic and social intricacies that make pursuing positive change difficult. Some impediments to porter health seem fixable with time and action, but nonetheless the realities experienced by porters are tricky to counter, as noticed with the municipality ID card program. Education and portering have a rocky relationship, with many porters leaving school to make fast cash, only to need education later on in order to advance their career and economic prospects. Problems where physical materials are directly involved have been pursued by some groups: clothing banks offer free equipment to porters, and the construction of porter shelters has provided many with a relatively healthy place to sleep. Improving porter well-being is also an ethical matter, and many groups spread this message throughout the industry. Abandonment and altruism are both common themes around Solukhumbu, and many fortunate and tragic accounts exist involving each.



Above: Taking a rest as the mules walk by in Namche

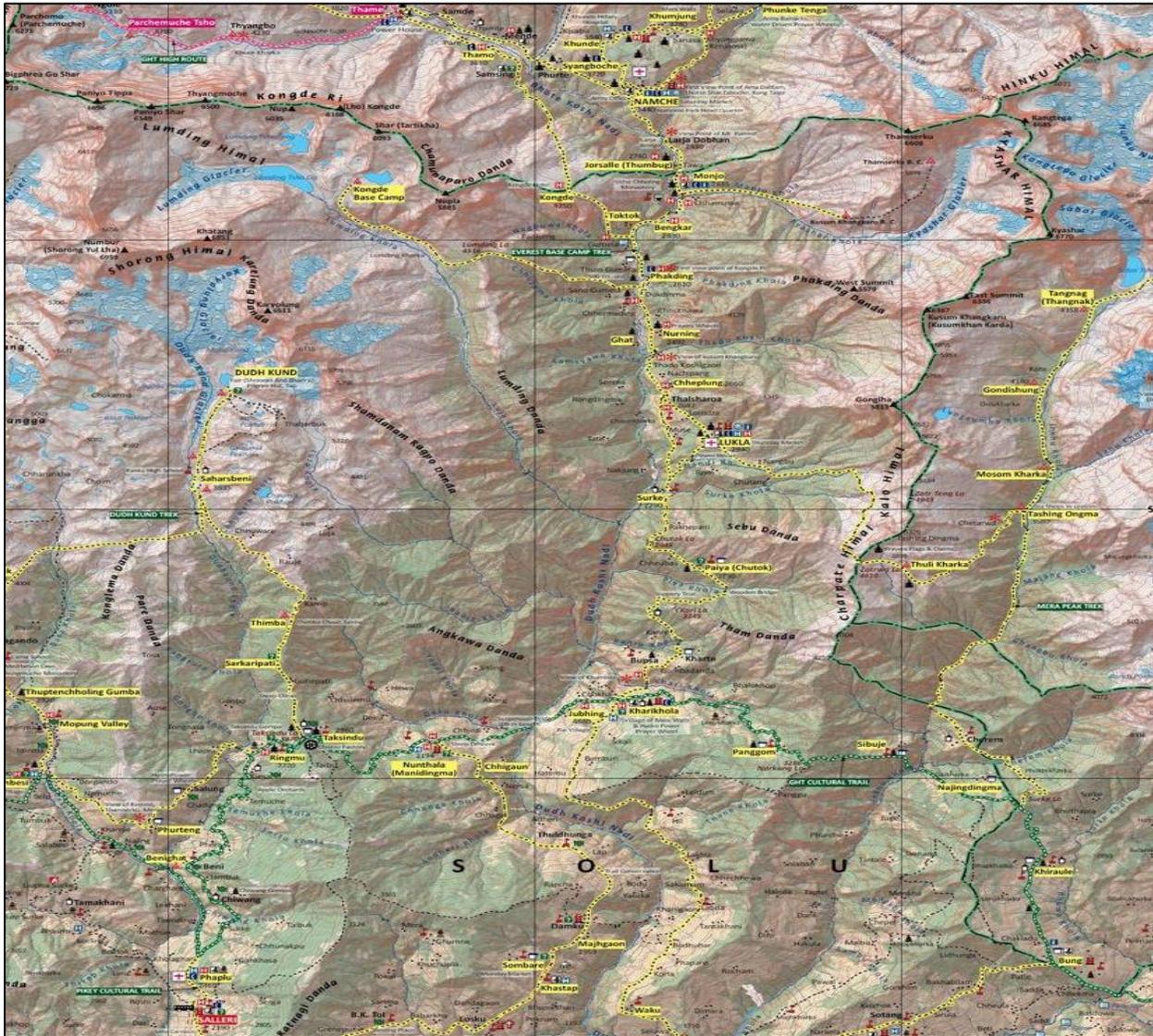
METHODOLOGY

Most information for this project was gathered from formal interviews. During sessions with health care professionals and NGO officers, interviews were straight forward and had a relaxed dynamic of an expert sharing information with an interested student. Usually I would write down a few important numbers and facts during the conversation, and afterwards frantically re-write everything I remembered from the interview. Yangji Sherpa served as a translator when talking to porters, guides and lodge owners who didn't speak English. During these experiences I kept quiet as Yangji asked the important questions. These conversations were much more tailored to the setting. Many times, we approached porters relaxing with friends by the side of a trail or enjoying a cup of chang in a Nepali hotel after a long day of walking, and I felt cautious about introducing my presence as a student researcher to a mostly uneducated population that might be apathetic or skeptical of my research agenda. I didn't use an audio recorder during this project as I felt it seemed intrusive during conversations.

Throughout the whole field experience, I felt privileged in that I was able to witness two sides of Solukhumbu society – the typical “trekker” experience and the lifestyle of the people who lived in the region. Lodges sometimes felt separated into two zones of the foreigner and the local, and most evenings usually featured trekkers mingling and eating separately from the lodge owners and their family members. I was fortunate enough to be invited to eat and sometimes even play cards with individuals in both spheres, and my experiences in porter shelters and Nepali hotels seemed unique as aspects of Solukhumbu society not typically witnessed by foreigners.

There were some limitations to this study. My fieldwork was only 17 days long and I feel that I am just barely beginning to understand the basic picture of porter health in the region. The conclusions drawn from research are made based on one set of locations (the settlements along the trek from Phaplu to Gokyo) and there could be other key aspects of porter society in Khumbu that I did not observe. Many of the places we visited were hospitals and rescue posts, locations that see a greater number of consequences of poor porter health. As this study sought to find impediments to porter well-being and analyzed health facilitators for any flaws, there was a bias to seek out the “bad cases”. My illiteracy in Nepali prevented the use of many paper and online resources that could have been used for this study. Finally, I was lucky in that my coresearcher was fluent in English, would ask interviewees insightful questions, tell me intriguing side comments that she heard and was super extroverted, but nonetheless there is a possibility that some information may have been lost during translation.

APPENDIX A – Map of Solukhumbu and trekking log



Date	Start	End	Notes
11/11/2018	Kathmandu	Phaplu	11 hour Jeep ride
11/12/2018	Phaplu	Bhusa	Jeep ride Phaplu to Taksindu
11/13/2018	Bhusa	Lukla	
11/14/2018	Lukla	Lukla	Visited hospital, clothing bank, Nepali hotel
11/15/2018	Lukla	Phakding	Visited health post, municipality center
11/16/2018	Phakding	Namche	
11/17/2018	Namche	Namche	Visited health post, hospital, porter shelter, Nepali hotel, market
11/18/2018	Namche	Namche	Visited Khunde Hospital, Khumjung



Date	Start	End	Notes
11/19/2018	Namche	Phortse	
11/20/2018	Phortse	Machhermo	Visited IPPG rescue post, porter shelter, Nepali hotel
11/21/2018	Machhermo	Gokyo	
11/22/2018	Gokyo	Gokyo	Visited 6 th Lake, porter shelter
11/23/2018	Gokyo	Dole	Climbed Gokyo Ri in the morning
11/24/2018	Dole	Namche	
11/25/2018	Namche	Lukla	
11/26/2018	Lukla	Juving	
11/27/2018	Juving	Phaplu	5 hour Jeep ride
11/28/2018	Phaplu	Phaplu	
11/29/2018	Phaplu	Kathmandu	11 hour Jeep ride

SUGGESTIONS FOR FUTURE RESEARCH

Two great resources for topics related to porter health and welfare include the IPPG (International Porter Protection Group) and KEEP (Kathmandu Environmental Education Project), though there are dozens of other NGOs and charities in the world that focus on similar missions. IPPG has rescue posts in Machhermo and Gokyo and KEEP has their office in Thamel, Kathmandu. Staff in both groups are very friendly and might even give you a nice hot cup of tea.

For themes in the Khumbu region, one can find the local Khumbu Pasang Lhamo Rural Municipality staff at their main office just north of Lukla.

In terms of budget, someone thinking about going to Solukhumbu and trekking around for two to three weeks should know that this project cost way more than the stipend given for the ISP. My biggest expense was food and lodging, which cost me about 3000 Rs per day for me and Yangji, my coresearcher. Hiring a coresearcher is also somewhat expensive, but I think for this project it was an absolute necessity as I was able to see many lesser-known features of Solukhumbu society and many of the people I interviewed spoke no English.

One can reach Nate Barott at his email: nb386@cornell.edu for topics related to porter health, studying in Nepal, and cafes of Kathmandu.

Other topics that I found interesting and think would be fun to explore include:

- Current reports of corrupt helicopter evacuations around Nepal, where trekkers are being pressured and tricked into leaving their trek for mild problems and paying large sums of money in the process.
- The concept of “voluntourism” and healthcare in developing regions. Many providers come to places like Nepal for brief “health camps” where huge numbers of local people suddenly have access to advanced care, but the ethics and long-term implications of this practice are complicated.
- Climate change in the Himalaya. Almost every day Yangji would point out mountains that used to have snow on them ten or so years ago but are now brown and lacking any white caps. The number of widespread and obvious implications of global warming in the Himalayan region surprised me.
- Future trends in labor demographics and shortages around Solukhumbu. I heard rumors about the number of seasonal workers to be decreasing due to more younger people moving to the city each year to pursue education.
- The global porter population. How does the Solukhumbu porter population compare to other groups in Nepal? Around the globe?
- The settlement of Phortse. According to Yangji, in this town all men climb for income. Every man I met who lived there had summited Everest.

INTERVIEWS

- Ang Nima “Pala” Sherpa, *guide (retired)*. Boudha, Kathmandu. 07 November 2018.
- Mingma Sherpa, *porter*. On the trail near Bupsa, Solukhumbu. 12 November 2018.
- Yangji Mingma Sherpa, *World Food Program officer*. Solukhumbu. 13 November 2018.
- Nicolas Calzoni, *doctor*. Lukla Hospital, Lukla, Solukhumbu. 14 November 2018.
- Ang Phurwa Sherpa, *dental assistant*. Lukla Hospital, Lukla, Solukhumbu. 14 November 2018.
- Tsering Lhamu Sherpa, *lodge owner*. Hotel Everest Eco, Lukla, Solukhumbu. 14 November 2018.
- Tashi Rai, *municipality worker*. Lukla Clothing Bank, Lukla, Solukhumbu, 14 November 2018.
- Babu Sherpa, *Nepali hotel owner*. Lukla, Solukhumbu, 14 November 2018.
- Captain Prajod Chettri, *helicopter pilot*. Lukla, Solukhumbu, 14 November 2018.
- Sandip BK, *health assistant*. Nachipang Health Post, Solukhumbu. 15 November 2018.
- Lakpa Yangji Sherpa, *municipality IT worker*. Khumbu Pasang Lhamo Rural Municipality office, Solukhumbu. 15 November 2018.
- Mohan Rai, *porter*. Rest stop near Monjo, Solukhumbu. 16 November 2018.
- Mahesh Bohora, *guide*. On the trail near Namche, Solukhumbu. 16 November 2018.
- Santos “Nikesh” Chettri, *porter*. Namche, Solukhumbu. 17 November 2018.
- Kami Sherpa, *teacher*. Namche, Solukhumbu. 17 November 2018.
- Pemdike Sherpa, *health assistant*. Mountain Medical Institute, Namche, Solukhumbu. 18 November 2018.
- Janak Kulung-Rai, *porter*. Namche, Solukhumbu. 18 November 2018.
- Mingma Sherpa, *doctor*. Khunde Hospital, Khunde, Solukhumbu. 19 November 2018.
- Bala, *teacher*. Khumjung Secondary School, Khumjung, Solukhumbu. 19 November 2018.
- Holly Andrews, *doctor*. IPPG rescue post, Machhermo, Solukhumbu. 20 November 2018.
- Tom Mathias, *doctor*. IPPG rescue post, Machhermo, Solukhumbu. 20 November 2018.
- Nardsh Rai, *Nepali hotel owner*. Machhermo, Solukhumbu. 20 November 2018.
- Mohan Babu Rai, *porter*. Machhermo, Solukhumbu. 20 November 2018.
- Angdawa, *guide*. On the trail to sixth Gokyo Lake, Solukhumbu. 21 November 2018.
- Babu Tamang, *porter*. Gokyo, Solukhumbu. 21 November 2018.
- Sadiksha Basnat, *KEEP program officer*. Thamel, Kathmandu. 02 December 2018.

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