Indigenous-Adivasi Health: Baseline Assessment and the Community Well Being Approach

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A note on the health baseline survey

The NBR is home to indigenous communities who have traditionally been dependent upon natural resources, utilizing and surviving on forest resources for a long period of time. Tamil Nadu's tribal population consists of 1.1 % of its total population. The Nilgiris district in Tamil Nadu has the highest tribal population of (4.5%). The communities are categorized as particularly vulnerable tribal groups (PVTG), a designation by the Government of India to indicate that they need special development assistance. The PVTGs are characterized by declining population, low levels of literacy and pre-agricultural level of technology. There are 75 such groups in the country, of which 6 are in the Nilgiris district, also a biodiversity-rich area. These groups have traditionally been hunting-gathering communities engaged in small subsistence farming.

There exists a large disparity of health between the indigenous and non-indigenous communities. The determinants of indigenous health not only based on their biological and physical attributes but also their long-standing history to land, environment, traditional systems of knowledge and culture.

Currently, health inequity is determined by their living conditions, susceptibility to infections, disease burden, inadequate nutrition status, contamination from the environment (faecal contamination), and mortality rate causes adversity in health. Gracey and King (2009) in their paper have mentioned, that for non indigenous population, the social determinants can include income, education, employment, living conditions, social support and access to health services. Whereas for an indigenous population it is much more than that, along with the above-mentioned determinants, the oppressive factors that started during the colonial period and then through the local governments that followed; like the introduction of communicable diseases[1], the introduction of tobacco and alcohol (not homebrewed or under the traditional settings) has had serious long-term effects on health causing severe social, psychological and emotional damage[234]. Also, discrimination, the loss of cultural identities such as language, environmental, spiritual and emotional disconnectedness has had an impact on health.

The alteration of balance and coexistence with the introduction of new governing principles, restriction to access traditional land, and systems forcing them to seek wage labour, has changed their livelihood activities, and their interaction with the land and the forest, which has reduced. The shift from subsistence farming and access to forests has impacted their food diversity and thus their nutritional status resulting in malnutrition.

In many countries, the policies made for the non-indigenous peoples and the indigenous peoples are the same. In India, though there are few ministries, policies, schemes, and acts that cater to the indigenous peoples, the health policies and schemes don't quite look into the indigenous health in a

[1] (2009, July 4). Indigenous health part 1: determinants and disease patterns - The .... Retrieved January 18, 2018, from http://www.thelancet.com/journals/lancet/article/PIIS0140673609609144/abstract
[2] (n.d.). Health of Indigenous people in Africa. - NCBI. Retrieved January 18, 2018, from https://www.ncbi.nlm.nih.gov/pubmed/16765763
[3] (n.d.). What is the contribution of smoking and socioeconomic position to .... Retrieved January 18, 2018, from https://www.ncbi.nlm.nih.gov/pubmed/16815379
[4] (n.d.). Aboriginal health and history: power and prejudice in remote Australia. Retrieved January 18, 2018, from http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0102-311X1995000100025

holistic way. Due to the remoteness of the communities, their access to the government systems and health care is compromised, especially when it is not taken into account while planning interventions.

Community Wellbeing and Vulnerability Framework

Measuring CWB in a community is useful in understanding the overall improvements in the community. It provides critical information at the local level, for decision-making, in the context of sustainable development. It focuses on the the economic, social, cultural and political components of a community, and how it contributes in maintaining itself and fulfilling the various needs of the local residents (Kusel and Fortmann, 1991). To enable us to effectively implement, monitor and evaluate the outcomes of the different intervention programs contributing to CWB, a conceptual framework was designed that provides a schematic representation of the different programs under CWB. It also includes the external and internal influencers that had direct implications on reducing vulnerabilities and improving CWB (See Figure 1).

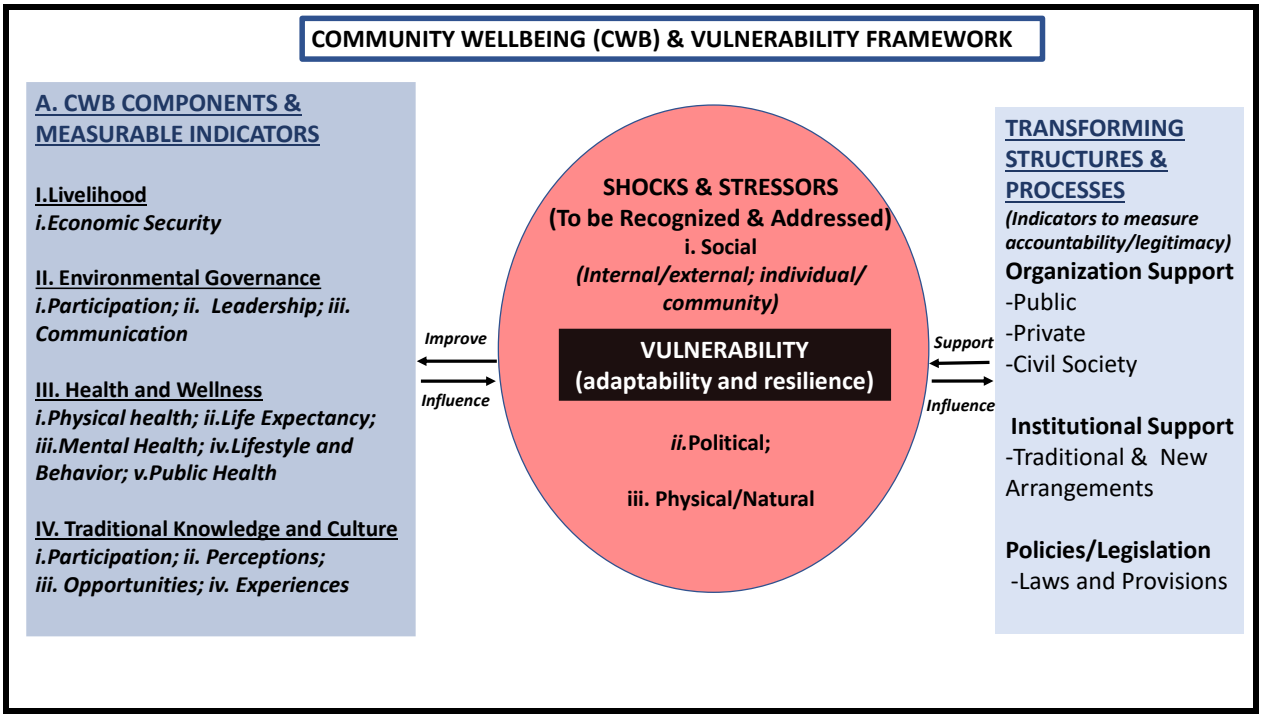


Figure 1: A schematic representation of how CWB can be achieved, by addressing Shocks and Stressors and reduce vulnerability.

CWB framework (see above), mainly comprises of three linked parts. There are the CWB components and the key measurable indicators for each component. The next section is the communities' "vulnerability" that is embedded within the larger context of "shocks and stressors" that are social; economic, political and physical/natural in nature, largely induced by the marginalized position they hold.

The last section is the "transforming structures and processes" that comprises organizational support; institutional support, policies, and legislation. Organizational support includes support from public, private and non-governmental agencies. Institutional support refers to established or traditional as well as new and innovative institutional mechanisms and policies and legislation include laws and provisions.

These transforming structures and processes are expected to address the vulnerability of the communities by recognizing and addressing the shocks and stressors. This in turn is expected to have an impact on vulnerability, (normally reduce it). This in turn will have a positive influence on the four key components of CWB. Similarly, on a reverse loop, poor CWB makes communities more susceptible to shocks and stressors, thus increasing their vulnerability. This will then send signals to the transforming structures and processors, influencing reactions across the key structures and processors. Thus there is a cyclic/dynamic nature to the framework. This framework can be used as a guide for the implementation process for achieving CWB, or for assessments and evaluations focusing on one or all of the components/programs. For example, if we are keen to examine if the health and wellness of a community have been achieved, through the various implementation projects in place, thus contributing to CWB, then we focus on that specific component and its key indicators. By comparing the current data to the preliminary survey, we will know if there have been improvements, what are the shocks and stressors that are rendering the community vulnerable in the context of health and wellness and what forms of transforming structures and processors are in place or can be created that can recognize and address the shocks and stressors.

Applying the CWB framework in the context of Health and Wellness:

The health of the community is a key component, and to achieve wellbeing, it is important to keep track of how people are really doing in respect to the broad determinants of health.

An earlier report by Keystone Foundation states how not only the social status has not improved but has rather deteriorated. “There is a significant increase in alcoholism and substance abuse. The youth, having gone to school do not want to continue living the old way and seek jobs outside. Women often remain in villages and continue to go for wage labor in nearby estates. They are usually both breadwinners for the household, as well as homemakers. It is observed that amongst the households in a village and within a community, interactions have reduced considerably as people are getting individualistic. The situation of single women, old widows and disabled needs special mention – as there is a lack of social support, livelihood options, malnutrition and isolation amongst them.”

Considering this, a health survey was then proposed to understand the determinants and the overall health status of the communities, in the Nilgiri Biosphere Reserve (NBR). This will further focus into the health seeking practices, the risk factors, the illnesses present, the infant and child feeding behaviour along with the WASH knowledge among the women, as they are the primary caregivers in the communities. In our study, we focus on two PVTG groups- the Irulas and Kurumbas living across five geographical areas across the NBR- Aracode, Coonoor, Konavakarai, Pillur, and Sigur.

In this summary report, we present our key findings pertaining to health and if and how it differs across the five geographical locations of the NBR. We are keen to examine the differences across geographical areas to understand the health status from a landscape perspective. As our intervention efforts in all the communities have been broadly in achieving community wellbeing, and health and wellness is but one of the key components besides governance, livelihoods, and traditional knowledge and culture, examining and evaluating our interventions at a landscape/geographical level, enables us to understand the outcomes, while simultaneously considering the various competing social, economic, political, and environmental/land use factors.

The study is a mixed method study incorporating the survey questionnaire and field notes. A list of all the Irula and Kurumba villages in the Keystone working areas were collated; a total of 103 villages.

Considering the remoteness of villages and the number of villages with each community (Irula or Kurumba) 50% of the population was chosen for feasibility. The villages were chosen by random selection (rand function on excel) giving a total of 47 villages with both communities (Irula 34 and Kurumba 13). Some of the villages that comprised of more than one (1) tribe, the village was considered to be of the tribe with a maximum number of houses, which was classified under the dominant community. *(For ex: If a village consisted of a total number of 50 houses split amongst two (2) tribes namely Irulas and Kurumbas each having 35 and 15 houses respectively, the village would then be considered to be an Irula Village and the total population would then be considered to be 35 instead of 50.*). Following data collection, the survey data was quantitatively analyzed using Excel and SPSS.

Key Findings:

1. **Socio-Demographic profile of the general surveyed population**

   All our interviewees were female, with the highest percentage (n=29.09) of women between the age group of 36 to 45 years. Women were chosen as respondents for the survey because they are the decision makers in the family when it comes to their diet and healthcare choices.

   A survey of 1231 members (308 households) was completed. Of this, only 4% of the population is less than 2 years of age indicating low birth rate. Members of the age between 13 to 18 years are the maximum population percentage of 16.65 followed by 19 to 24 years at 14.87 and 26 to 35 years at 13.65.

   The following table also shows the illiteracy rates and marital status in the communities. What are alarming in the results are the percentages of single women, their age range and women headed households. These percentages though are in the population at the time of the survey, these numbers indicate the need for special interventions and to identify the reasons behind the high percentages.

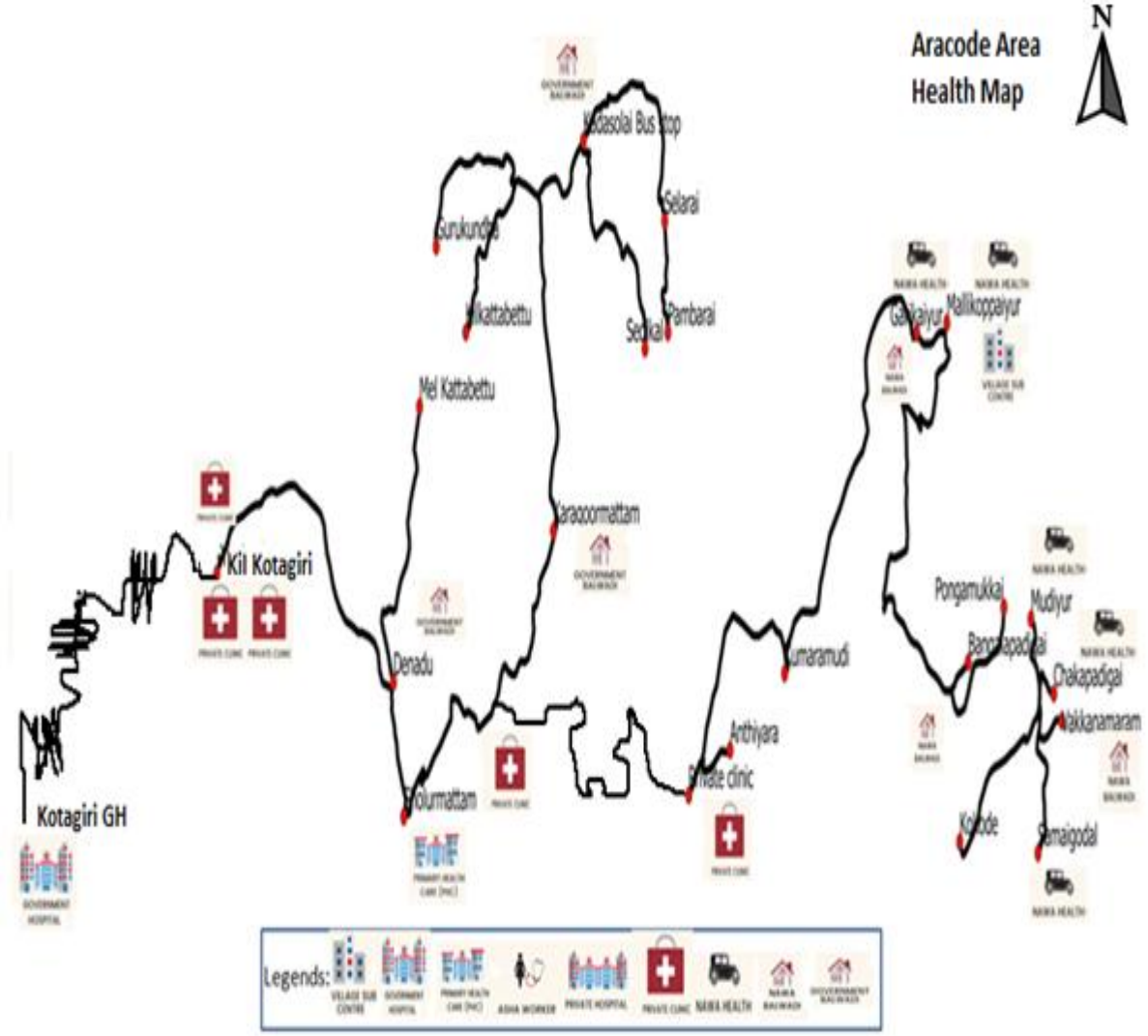
   Table 1. Shows the percentage of illiteracy and the marital status of the population surveyed

Demographic details (population = 308)	**Percentage**
Illiteracy	
General population	60
Women	46
Marital status	
Married	41
Widowed/divorced/separated	5
Single	54
Highest percentage frequency of widowed women> 56 years of age	41.57
Women headed household	19.48

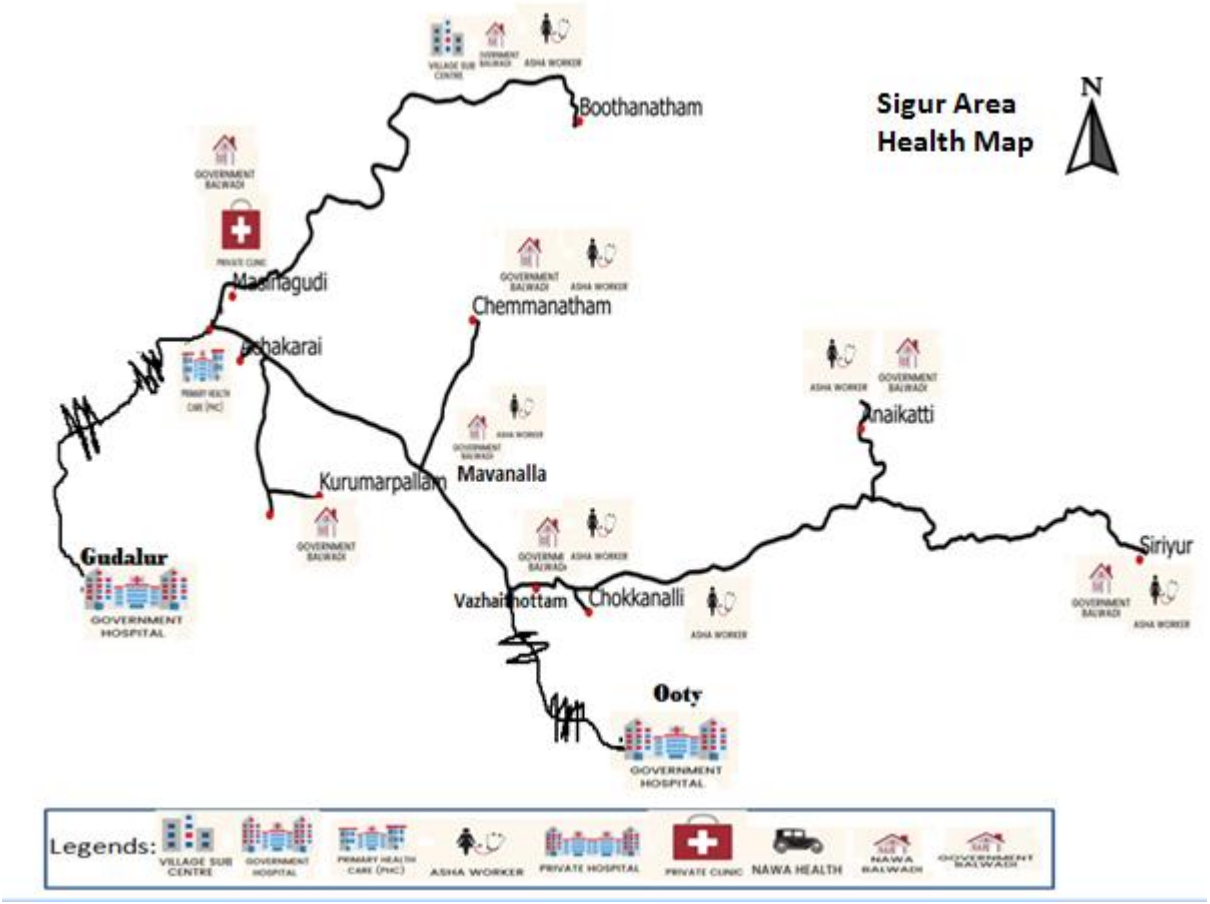
1.1 Access to health facilities and pathways to care

The following maps indicate the villages surveyed and the health facilities accessed by the community members. As mentioned by the members of the communities, they seek treatments with hospital services like NAWA,GH and other private clinics. They also go to the traditional healers when they suspect that have been caught by '*bad omen* or *kathu*'. Many of the common symptoms like vomiting, dizziness, unexplained body aches, and seizures etc are consulted with traditional healers. Infections are mostly consulted with the hospitals. There have also been general feelings of mistrust amongst community members leading to suspicion and seeking priests to cleanse their homes and villages. When talking about indigenous health there is a need to be mindful of these governing belief systems and worldviews because they are constantly juxtaposed with other health care systems.

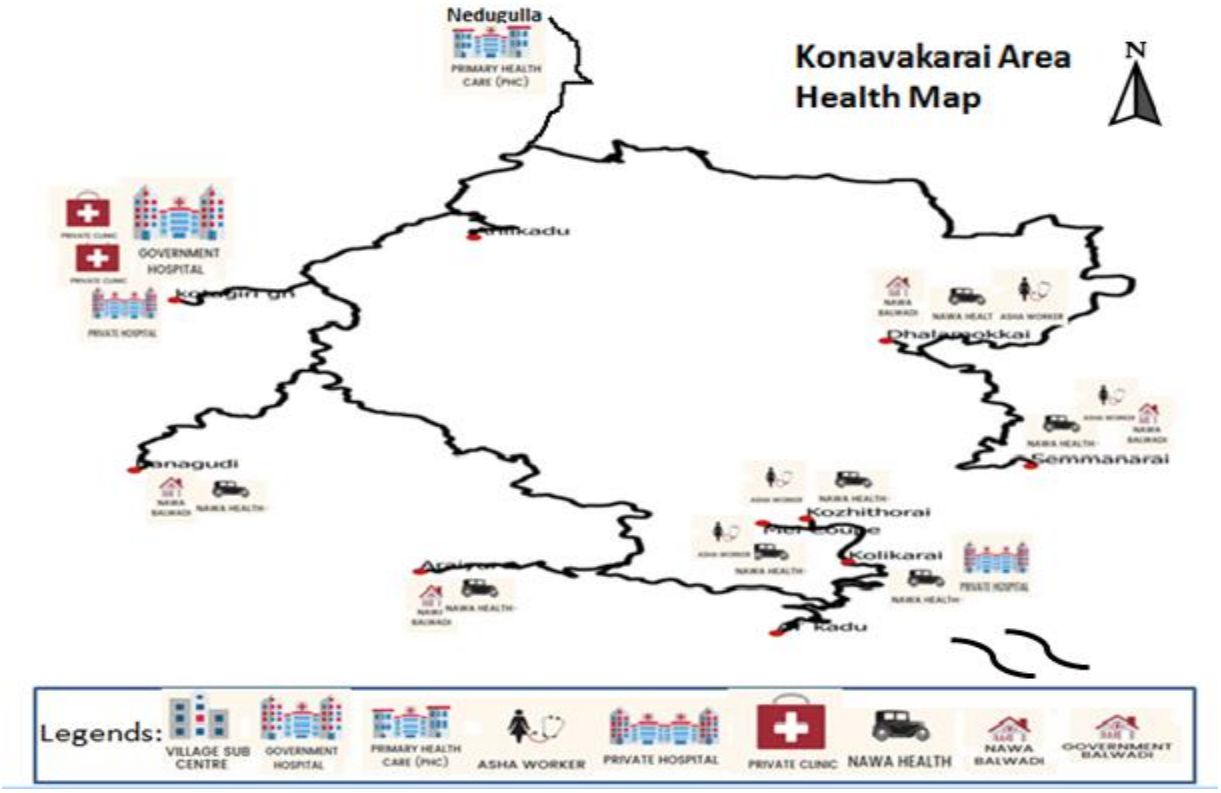
MAP 1 Aracode



Map 2 Sigur



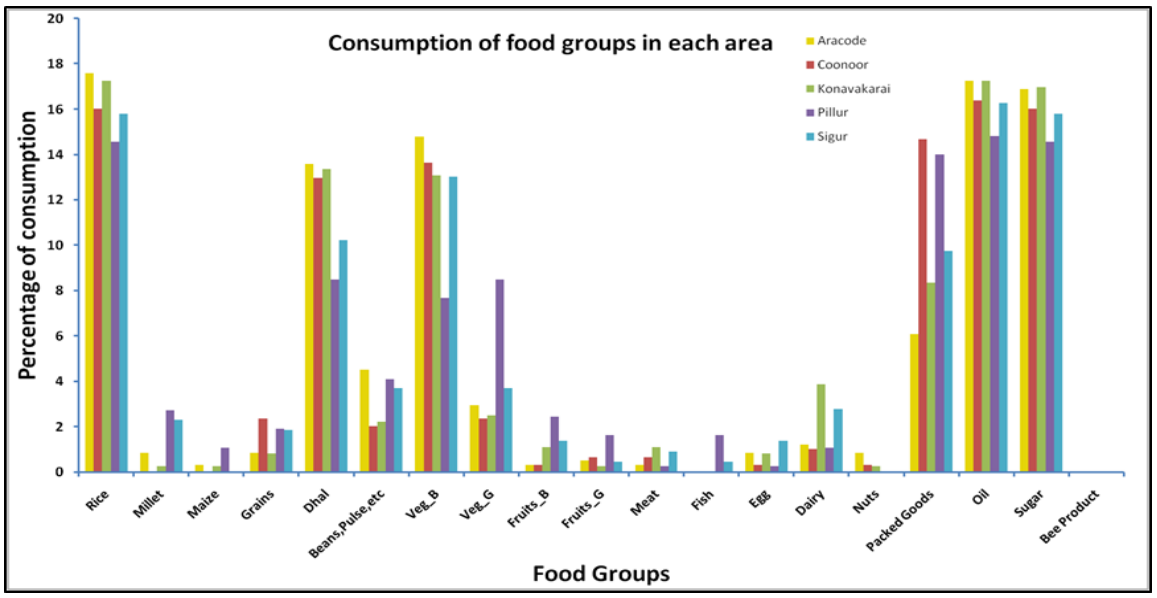
Map 3 Konavakarai



2. Food intake, Nutrition, and Access to food

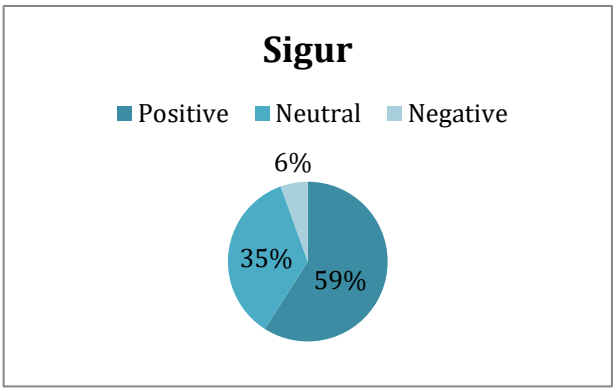
Our findings indicate that there is a significant difference in food diversity across the five areas. *From the survey, we see that a meal consists of rice, dal, vegetable, pack goods, oil, and sugar*. The most diversity in terms of food intake is in Pillur, followed by Coonoor, Sigur, Konavakarai, and Aracode. However, when we examine closely, their diet is largely high carb-low protein diet, with a high dependency on the public distribution system (PDS). Interestingly, our interactions with the community members revealed a general awareness of healthy and nutritive diet. Despite this awareness, the higher consumption of staples procured from the PDS, and packaged food items from retail shops close by, indicate constraints or barriers in accessing nutritious and balanced diet. Also, protein intake, in general, has gone down in all areas except Pillur where there is access to fish from the river. In areas like Coonoor where there used to be the cultivation of pulses, the production has gone down, and thus access to traditional, protein intake has reduced. None of the interviewees mentioned that they also consumed honey which is linked to their tradition.

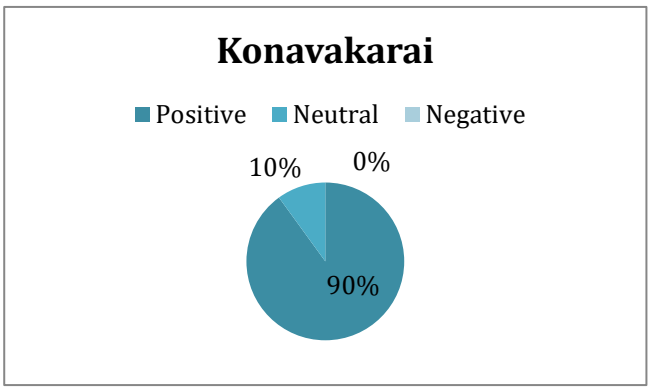
Figure 1: Shows the percentage of consumption of different food groups across Aracode , Coonoor, Konavakarai, Pillur, and Sigur areas



Traditional food like millets is hardly consumed across areas (none at all in one area). A project of Keystone foundation focused on providing *ragi* (finger millet) for 150 families across Aracode, Konavakarai, Pillur and Sigur for 6 months. Post project surveys indicated positive impacts on their health with increased energy and stamina before which they said that they had severe body ache and often had to take a month long break to recover. The reason for this was the lack of a balanced diet resulting in these ailments and *ragi* was something that kept strong. The beneficiaries have been requesting to avail subsidized *ragi* as it was rich in nutrition.

Figure 2 shows the perception of positive, negative or neutral changes after the consumption of *ragi*





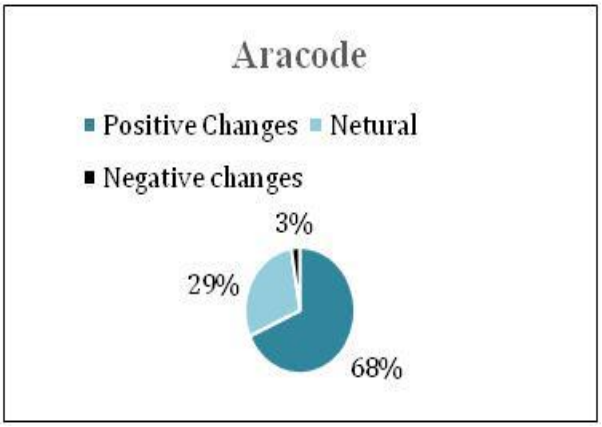
3. Health and Risk Factors

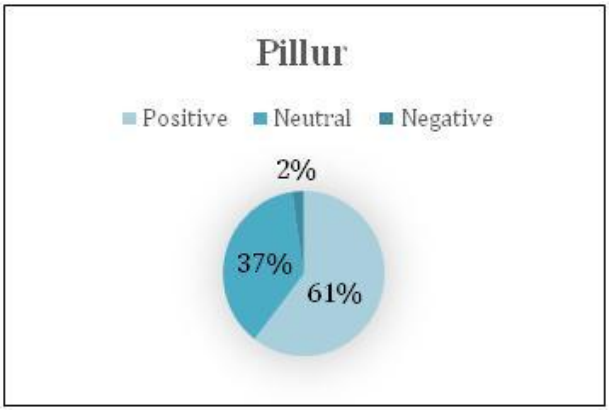
Our findings indicate key health factors that predominate at the household level as well as among the women. The health or risk factors can be broadly categorized as socially induced, habit-forming factors and factors that have implications for mental health and wellness. Under the former category, some of the predominant factors include chewing tobacco, alcohol consumption, and smoking. The latter category includes low appetite, disturbed sleep, and anxiety.

I. Socially induced, habit-forming health factors

1. Chewing Tobacco (CT): Chewing tobacco is the most reported overall. Aracode has the highest reporting of CT, followed by Pillur, then Konavakarai, Coonoor and least reported from Sigur. However, there is no significant difference across the five areas in their tobacco usage.
2. Smoking: Smoking is the second most reported habit forming risk factor. Aracode has the highest reporting of CT, followed byKonavakarai, Pillur, Coonoor and least reported from Sigur. However, there is no significant difference across the five areas in terms of smoking habit.
3. Alcohol Consumption: Alcohol consumption, although comparatively least reported, there is a significant difference across the five areas. Aracode area had the most reporting, followed by Konavakarai. Coonoor and Pillur reported equal numbers and Sigur had the least reporting of alcohol consumption.

II. Health factors with mental health implications



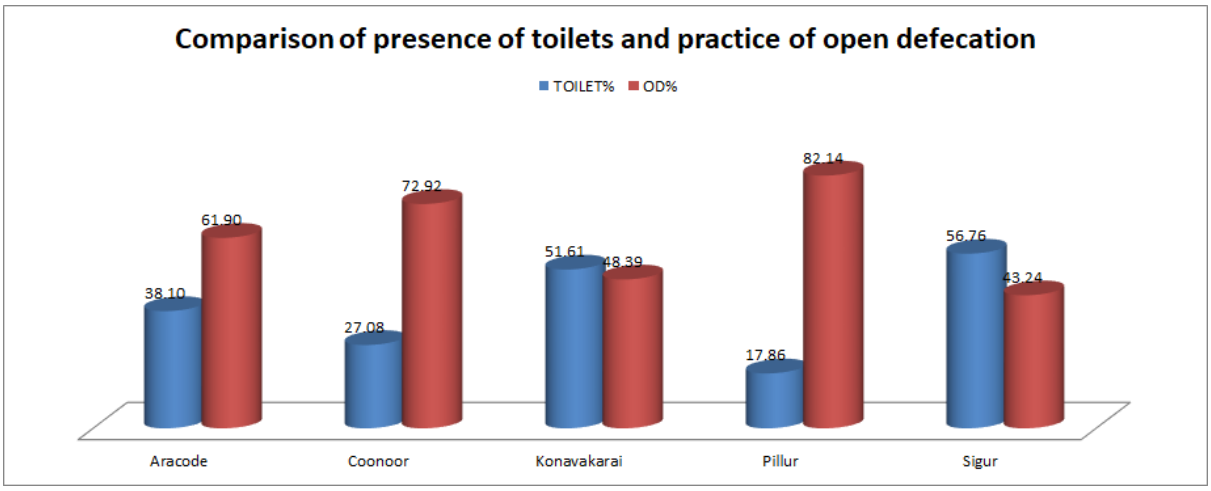


1. Low Appetite: Low Appetite is the most reported overall, with a significant difference across the five areas. Across the different areas, Aracode had the highest reporting, followed by Konavakarai, Coonoor, Pillur and then Sigur.
2. Disturbed sleep: Disturbed sleep is reported almost equally overall. Of the total 303, 152 reported they did not suffer from disturbed sleep, while 151 reported they did not suffer from disturbed sleep. Across the five areas, Aracode has the highest reporting. Across the other four areas, reporting of disturbed sleep is quite similar. Also, no significant difference across the different areas is found.
3. Anxiety: A slight majority reported not having anxiety. However, an almost equal number reported on having anxiety. Among those who reported on anxiety, Aracode had the highest number, followed by Konavakari, Pillur, Coonoor and then Sigur. However, these differences across the areas are not significant.

4. Water, Sanitation, and Health (WASH)

Under water and sanitation, our primary focus has been on the availability and usage of toilets and hand washing habit . When asked whether washing hands with only water would suffice, the highest number of interviewees were from the Konavakkarai area who responded negatively and said that they need to wash with soap (n= 90.32%). The least number of interviewees who responded that washing with soap is necessary were from the Coonoor area (n = 67.39%).

For all the areas, our primary data indicate the availability of toilets. They were constructed within the last year. However, overall, the majority reported not using the toilet despite its availability. Our analysis shows that the majority does not use the toilet which can be interpreted as the majority continue to engage in open defecation. When we looked across the five areas, Aracode reported the highest number, followed by Sigur, then Coonoor, Konavakarai and last Pillur. There are also significant differences across the areas.



5. Infant and Young child practices

Across all areas, out of 308 households, there are only 37 infants below the age of 2 at the time of the survey. The percentages indicated below might not be a true representation of the population due to

low number of infants and might need a wider sample size. The interviewees at Sigur and Pillur reported that they do not receive supplements from the Balwadi and in Coonoor, they reported the highest coverage at 67% followed by Konavakarai at 58 % and at Coonoor at 10%. There is also a considerable number of home deliveries, Aracode 70%, Konavakarai 25%, Sigur 100%. Pillur and Coonoor had more institution deliveries at 83% and 100% respectively.

A survey on infant nutrition habits shows that across areas an average of 52% of the households has chosen to give *ragi kool* for infants when they are 3 months old. Traditional medicine is not preferred for infectious diseases with infants. Across all areas, they reported that they prefer taking the children to the hospitals.

6. Focus group discussions

After the survey, the results were presented back to the community members across areas at Aracode, Konavakarai, Pillur, and Sigur. While they agreed to the indications, more information was gathered on some of their opinions.

Livelihood

- The people have to make a choice between going for work and farming. Being dependant on the markets is what is bringing all the diseases in the village. There needs to be a switch to organic subsistence farming. They want to grow their own food, but to go back to farming, the wildlife movements, climate change, and unity of the people make it almost impossible.
- They also mentioned that even though their income levels have increased from the past, their dependency on external markets and living costs are considerably high. This increase in income does not add to better quality of life.

Socio-cultural aspects

- People meet for rituals, festivals, and ceremonies. However, there is no unity in the villages and the traditional leadership system is not effective anymore. There is a lot of black magic cast on people because of jealousy. No one would know who has cast it but there are some illnesses that cannot be treated in hospitals without appeasing the gods or going to a healer who knows how to remove the curse.
- The elders of the village would guide people on illness. Now only people who have money can afford to go to hospitals. Consulting with healers on the cause for ill health was one efficient way to remain healthy. Now that the system does not work, their health is failing because the actual cause of the illness is unknown.
- Now there are more single women than men. The support for single women is not significant in the villages but it can’t be helped because there is no unity.

Health

- Traditional food like millets and wild food along with growing organic food are what kept them healthy in the past. Now because they eat inorganic food, even traditional medicines do not work.
- Kitchen gardens are good. It is difficult to guard them against wild animals and birds. With kitchen gardens, they said they need fences.

- Alcoholism is a very big issue. The introduction of drinking habits is what has lead to a lot of deterioration in health and unity in the villages. It is not only spoiling a man's health but also brings a lot of problems in the family. In a particular area, they mentioned that people consume alcohol and become suspicious of their spouse. The increase in income has lead to more alcoholism. It is also because of mainstreaming and mixing with non-adivasi people. There is no other entertainment in the villages and drinking is recreational. The government will have to bring in strict restrictions in adivasi areas to curb alcohol use because they are the ones who sell it. In a few areas, there are also reprimanding systems in the village.
- There are toilets but not everywhere. It is difficult to use it to due to various problems, like lack of water, cleanliness etc
- Clean water is necessary for living. Earlier the land and the water was clean, now they get only dirty water once in a while.

Access to road

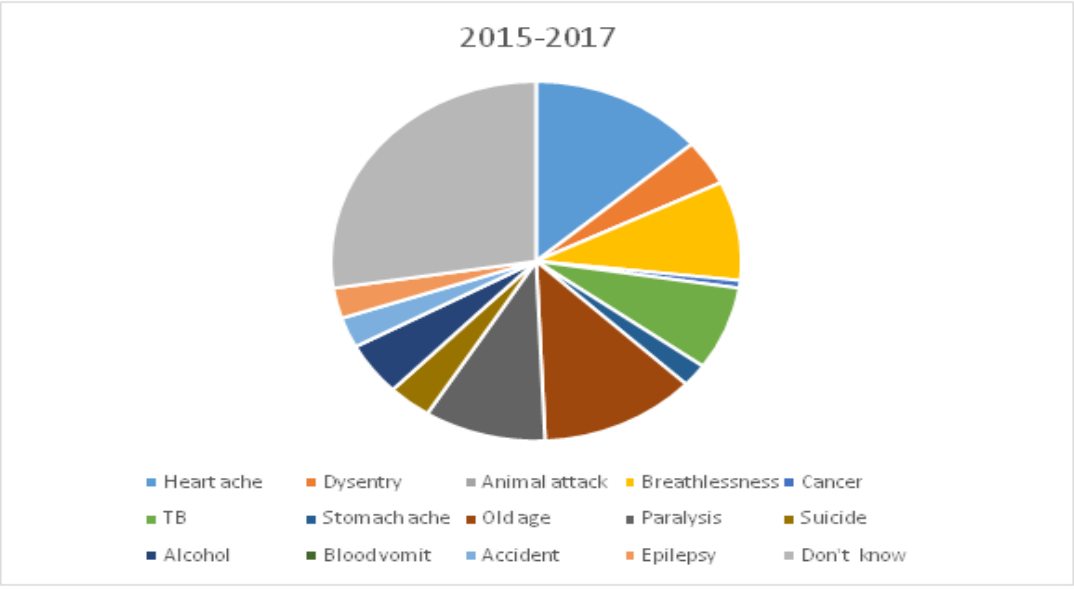
- Access to road was mentioned as a big development across all areas. They feel that access has improved over the years. There are cars, buses, and jeeps that bring more mobility. They said that they need jeeps so that it can compensate for their ill health. It is necessary to go to hospitals.

Education

- Education is good. It brings information that they need to survive. Makes them more knowledgeable about the external happenings in the world

Verbal autopsy

Efforts were also taken to understand the causes of death. After 2015, a revised verbal autopsy form was administered to understand the causes and reasons of deaths and demographic details of the deceased person. The data collected between 2015 and 2017 indicates the following trends.



Between 2015 and 2017, a total of 136 deaths have been reported across areas. Looking at the causes of the deaths, there is a clear majority where the problem is 'unknown', and the next in order of occurrence is the heartache. In this data set, it was analyzed that a considerable number of deaths in the areas happen due to old age. Yet the point to focus on the 2015-2017 data is the deaths that have happened due to breathlessness and tuberculosis. Mental wellbeing should also remain a point of concern as the number of suicides in the 2015-17 data has considerably increased when compared to the 2007-2012 data.

Conclusion

This summary report is an effort to consolidate and report on some of the key aspects that were revealed through our survey analysis for the five areas where Keystone has long-term engagements. As health and wellness is an important component towards achieving community wellbeing, we felt that a baseline survey to understand the current status within the communities across the five areas would help with planning focused interventions. Although the survey explored many questions related to health, we found four broad areas of intervention to begin with. Based on what the results have revealed, we propose multiple strategies towards health intervention. The CWB framework is expected to serve as a guide to implement the various intervention strategies.

i. Social Facilitation: Social facilitation or in other words arranging pathways to health is expected to improve access to health care. One approach would improve the capacity of the local health volunteers and health workers and set up a sound network for health awareness and support. An important aspect of this, besides providing awareness and training classes, would be the distribution and maintenance of wellbeing cards for each family. This card would include all the key information that would track the health status, as well as information related to other key components of well-being, namely, rights and governance, livelihood, and traditional knowledge and cultural identity.
ii. Awareness and Training: Awareness classes associated with the key wellness related factors presented here namely- Food intake and nutrition, health risk factors, and WASH are expected to improve communities awareness and motivate them towards adopting pro-health behavior. These classes are expected to be provided by the health workers and volunteers, either through holding village level sessions or through various groups created within the communities (e.g. women's groups, youth groups, etc). Training for improving the knowledge and capacity of health volunteers and health workers is expected to facilitate much of the community awareness and extension related activities effectively.
iii. Research: A process of evaluation is recommended as it will help us track improvements in health and wellness reported by the community and also informs us of the effectiveness of our intervention strategies and improves them as required.
iv. Plan for interventions that focus on promoting healthy ways of living by having providing clean nutritious food. Emphasize for women and children to feel energetic and to reduce anemia. Free consultation, ragi subsidies, and kitchen garden have made them healthier.

Policy Recommendations

i. Promotion of traditional, nutritive food. Millets and other locally grown grains can be made available through the Public Distribution system or to buy it at subsidised rates.

ii. Strengthening Balwadi and ASHA workers: Currently most villages seem to have a village nurse visiting them from the village sub centers. Yet, a more wholistic intervention is possible through establishing Balwadi teachers/ and ASHA workers. They would be present and accessible to the community members on a more consistent basis and this would enable better discussions and awareness on general maternal and child health aspects. However our observations and interactions with the community members also revealed the ineffective functioning of Balwadis in the areas and also the absence of the ASHA workers. This gap needs to be addressed as their presence is expected to have positive implications on both maternal and child health. The community health workers could work with ASHA workers to bridge the gap of other health care needs in the communities (eg. Nutrition, WASH)

iii. Reinstating the positions of tribal health counsellors in the Govement hospitals. This system was effective and helpful to the community members who visited the hospitals earlier.

iv Making provisions for initiating District Mental Health Program (DMHP) in Nilgiris. Under the district mental health program, facilities/resources are readily available to be tapped if a district has been identified as a DMHP area.. It would help to streamline access of these existing resources, and this is expected to help potential beneficiaries from receiving timely diagnosis and treatment. We would be able to link community members to these facilities and also follow up with them to ensure continuing treatment and also assess if there has been overall improvements. Reliable psychiatric services at the taluk hospital would ensure consistent treatment support to the mental health patients and this would have positive outcomes in the communities. This could address the substance use problems and indirectly curtail illegal supply in these areas.