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The Health Ramifications of Poorly Ventilated Cooking Areas in the Indigenous Populations of Guatemala

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Pan American Health Organization, indigenous people are living in extremely poor rural areas. Indigenous people are considered poor and some are extremely poor. According to the Human Development Report, more than half of these people are Q'anjob'al, Itza', Kakchiquel, Chuj, Hza', Ixil, Jacalteco, Kaqchikel, K'iche', Mam, Mopan, Poqomam, Poqomchi', Q'eqchi', Sakapulteco, Sakapakense, Tekiteko, Tz'utujil, Uspanteko, Xinka and Garifuna. According to the Human Development Report, more than half of these indigenous people are considered poor and some are extremely poor. According to the Pan American Health Organization, indigenous people are living in extremely poor rural conditions where they barely receive any health care benefits.

Background

Indigenous people contribute to more than 40% of the Guatemalan population. The most common inhabitants are the Achi', Akateo, Anateco, Chukiteco, Ch'orti', Chuj, Hza', Ixil, Jacalteco, Kaqchikel, K'iche', Mam, Mopan, Poqomam, Poqomchi', Q'eqchi', Sakapulteco, Sakapakense, Tekiteko, Tz'utujil, Uspanteko, Xinka and Garifuna. The creation of new wood-saving stoves is a good way to accommodate the different ethnic and cultural backgrounds of indigenous people. The Highland Support Project (HSP) is working with the Partners in Service Project to build new stoves with chimneys that channel smoke out of their dwellings. Benefits of the new stoves:

- More fuel-efficient way of cooking
- Less wood consumption than open pit fires
- Decreased amount of deforestation
- Economic benefits (requires less cooking fuel)

Other Major Side Effects of Unvented Cooking

- Atopic syndrome arises due to living in an unhygienic condition
- Rapid deterioration caused by cooking
- Global warming and climate change due to emissions of black carbon (BC)
- The emission of particulate matter (PM) is increasing environmental pollution

Consequences of Unvented Cooking

The way indigenous people cook is proven to be unhealthy due to poor living conditions that do not allow smoke to exit. Since the cooking process is conducted without any kind of ventilation, a thick smoke layer fills the entire house after a couple of days of cooking. The amount of smoke released within a single cooking period is equivalent to the smoke that would be released by 500 cigarettes. Recent epidemiological research proves that the thick layer of smoke in the highlands of Guatemala is causing most of the residents’ respiratory infections. In a Kiche-speaking community, a woman typically spends an average of 5 hours per day with the fire lit. Consequently, young children inhale an excessive amount of smoke during that cooking period and suffer from respiratory infections. Other major illnesses include asthma, diabetes, tetanus, tuberculosis, fever, flu, parasites, and various skin diseases etc. Asthma is highly correlated to one’s exposure to air pollution. International organizations sometimes only investigate Latin American countries in general and completely ignore indigenous communities; however, these people are at high risk of suffering from multiple respiratory complications.

Table 1: Breakdown by age group and gender

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Male</th>
<th>Female</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 5</td>
<td>42</td>
<td>53</td>
<td>62</td>
<td>73</td>
</tr>
<tr>
<td>5-14</td>
<td>32</td>
<td>43</td>
<td>43</td>
<td>54</td>
</tr>
<tr>
<td>15-24</td>
<td>24</td>
<td>35</td>
<td>36</td>
<td>47</td>
</tr>
<tr>
<td>25-34</td>
<td>16</td>
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<td>27</td>
<td>38</td>
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<td>35-44</td>
<td>9</td>
<td>11</td>
<td>11</td>
<td>13</td>
</tr>
<tr>
<td>45-54</td>
<td>5</td>
<td>7</td>
<td>7</td>
<td>9</td>
</tr>
<tr>
<td>55-64</td>
<td>3</td>
<td>5</td>
<td>5</td>
<td>7</td>
</tr>
</tbody>
</table>

Who else is Involved?

The efforts to design efficient stoves for indigenous communities in the Highlands of Guatemala have been quite successful. Many projects carried out by the Government and national-level NGOs have been working to improve stoves in terms of reducing indoor smoke and improving the efficiency of fuel wood. The Guatemalan government and the World Bank provide substantial contribution to improved stove projects.

Recommendations

- Users should provide more feedback for the designers to increase stove efficiency and innovation
- There should be more monitoring and evaluation to improve quality
- Stove users should be viewed as clients, rather than beneficiaries
- Stove methods should be diversified
- Stove price should be reduced

Conclusion

Improved stove projects are constructed to accommodate the different ethnic and cultural backgrounds of indigenous people. The creation of new wood-saving stoves is a good strategy, economically and in terms of health. These kinds of solutions should be implemented so that indigenous people do not experience health complications that would require them to seek health care which many cannot afford.

References


