

SAM PHOTO DIAGNOSIS

Currently, on humanitarian emergency settings, anthropometry provides the only plausible diagnostic method for nutritional status in children under five years of age due to the need for speed and simplicity but also for efficiency and efficacy. However, anthropometric measurements require expert staff with previous training. The development of an easy-to-use diagnostic tool based on mobile phone technology could help with the community management of child undernutrition.

In the last decade there has been a huge advance in the knowledge and application of morphometric methods in the study of the human body shape. One of the most innovative technique is Geometric Morphometrics which is based in a dot marking process of an image that allow to draw triangles which are the simplest geometric form that can build all the others. The Geometric Morphometric multivariate analysis allows the assessment of the shape of anything recorded in any type of image (photography, scan, x-ray, etc.).

The hypothesis of this research is that the body shape of a healthy child with normal weight statistically differs from that of a malnourished child and that these differences can be measured using Geometric Morphometric techniques to improve the diagnosis of the disease.

This Project will apply such techniques in infant SAM identification as an alternative or complement to classic anthropometric methods. The acquired knowledge will be focused on the development of an App able to diagnose SAM by means of pictures of body features

