Malnutration in Bhubaneswars slums: a problem?

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The project ran from the end of january 2012 till the beginning of March 2012.

During this 7 week period we, two students in nursing, together with several members of the Ruchika Social Service Organisation staff interviewed 210 mothers individually about their knowledge on healthy food and feeding habits involving their children.

At the same time we measured and weighted these children, all between the age of 0 and 5. As a third antropometric given we used the MUAC (measurement of the upperarm circumfrence).
All measurements combined gave us a well funded view on the healthstatus of all of the tested children.

The outcome of the investigation showed us that 10% of the tested children were/are severly malnutritioned. 50% of these 10% are suffering from growthretardetion due to malnutration.
27,5% is struggling with a medium form of malnutration.
Problems of this kind are equally divided over both sexes.

The following numbers show a more precise view on the malnutration issue present in Bhubaneswars slums.
In the schematics down below, the ages are shown in months. N means ‘number of childeren’ and %<-3SD stands for ‘ severly malnutrationed’ where %<-2SD stands for ‘medium malnutrationed’.

Set 1: both sexes combined

Age groups	***N***	***Weight-for-length/height (%)***		
		% < -3SD	(95% CI)	% < -2SD
Total:	***258***	***10,1***	***(6,2%, 13,9%)***	***27,5***
(0-5)	1	**0**	(0%, 50%)	**0**
(6-11)	31	**6,5**	(0%, 16,7%)	**22,6**
(12-23)	61	**13,1**	(3,8%, 22,4%)	**32,8**
(24-35)	57	**12,3**	(2,9%, 21,7%)	**26,3**
(36-47)	57	**5,3**	(0%, 11,9%)	**17,5**
(48-60)	49	**12,2**	(2%, 22,4%)	**38,8**

Set 2: Males

Age groups	***N***	***Weight-for-length/height (%)***		
		% < -3SD	(95% CI)	% < -2SD
Total:	***127***	***11,8***	***(5,8%, 17,8%)***	***26,8***
(0-5)	0			
(6-11)	12	**0**	(0%, 4,2%)	**0**
(12-23)	31	**19,4**	(3,8%, 34,9%)	**32,3**
(24-35)	24	**12,5**	(0%, 27,8%)	**25**
(36-47)	30	**3,3**	(0%, 11,4%)	**13,3**
(48-60)	30	**16,7**	(1,7%, 31,7%)	**46,7**

Set 3: Females

Age groups	***N***	***Weight-for-length/height (%)***		
		% < -3SD	(95% CI)	% < -2SD
Total:	***131***	***8,4***	***(3,3%, 13,5%)***	***28,2***
(0-5)	1	**0**	(0%, 50%)	**0**
(6-11)	19	**10,5**	(0%, 27%)	**36,8**
(12-23)	30	**6,7**	(0%, 17,3%)	**33,3**
(24-35)	33	**12,1**	(0%, 24,8%)	**27,3**
(36-47)	27	**7,4**	(0%, 19,1%)	**22,2**
(48-60)	19	**5,3**	(0%, 17,9%)	**26,3**

(note: 0% of malnutrition in the age groups 0-5 months because of the fact that most children are being breastfed during this period)

Signs of malnutration were also clinacly observed during the interviews and measurments. Bilateral or bipedal oedema, change in haircolor and/or hairstructure, skinabnormalities (f.e. dermatosis, dry skin, flaky skin), pale conjunctiva/nails/lips and skin, frequent headaches, tiredness, growth retardation and dehydration were signs noticed by the researchers during the time of research and observation.

Also, more than 70% (?) of the childeren which took part in the researchproject were subject to fever, cold and cough. Diarrhea is also frequently present among the children of the slumcommunity. Interviewed mothers mentioned that these were healthissues with a on and off character. Healtproblems are reoccuring and seldom short stay.
Poor living conditions aswell as insufficiant intake of vitamines and other necessary ingredients aswell as the unhygenic waterdistribution could be the reason for this high percentage of flulike symtoms.

In this researchproject we have not paticullary made a difference between children living in slums which are superviced by Ruchika Social Service Organisation and slums in which RSSO does not operate. Although, during fieldobservations, we notice a difference in percentage of malnutrationed children when we compare Ruchika and non-Ruchika slums.

On the other hand, not only the children are suffering from malnutrition. During our survey and interviews we concluded that about 17% of the mothers we approached had a Bodymass Index (BMI) below 18,5 which is the equivilant of malnutrition.

BMI		%
BMI < 18,5	32	**17,02**
18,5 ≤ BMI ≤ 24,9	103	**54,79**
25,0 ≤ BMI	53	**28,19**

(note: out of 210 interviewed women, 188 women were weighted and measured)

This issue is triggered by the lack of money, which keeps the families from buying sufficient amounts of food, aswell by the still present divide in rights for man an women. It's not unusual for a woman/mother to not eat untill all other familymembers have finished their meals. Whatever is left over, is for the mother. Unfortunatly, due to the lack of money, and so, just a little amount of food, mothers more than often get left out when it comes to eating which results in a low BMI.

Results from the interviews

During the individual interviews following questions were asked to gather information on the feeding patrons and the ingredients which make up the family meal.

- Constitution of the family?
- Economical status of the family: profession of the parents, other working familymembers, possessions?
- Drinking and eating habits of the child: breastfeeding, frequenty per day, acces to water, portions (customized or not), snacks, assistance with eating, composition/ingredients of the meal?
- Where do they obtain their food and where and how do they prepare the food?

As previously mentioned, the main reason for not being able to provide the children the sufficient amount of food or ingredients is because of economical shortcomings: the lack of money (75%(?) of the interviewed mothers mention this).
The monthly income of the everage household is situated around 1500 to 4000 ruppees. The average family consists of 4 to 5 familymembers.
Although some family's get some sort of suppored (by getting a BPLC, RC or OPC), it is still not enough to buy everything that is important in a childs diet.
Financal difficulties make it impossible for the family's to buy fresh and healthy food (fruits, vegetables, fish or meat).

Other causes that lead to an unsufficient intake of healthy food and/or ingredients are:

- the absence of knowledge on healthy food, diets and composition.
  Not enough money is one thing, but not knowing what to buy is another. During the survey we noticed that parents, both mother and father, are more than often not well educated when it comes to healthy food. They get their information from tv, elderly familymembers (mother to daughter teaching) and healthworkers.
  Unfortunatly, this last component does not reach out far enough to get the point across.

On the other hand, we noticed that a lot of parents are very young and so by age not in the position to have a lot of insight in healthy products and their use.

- the absence of desent cooking equipement, -space and combustibles.
  Uptill now, mothers, as they usually are the person in charge when it comes to cooking, use small wood- or kerosinestoves. The first way of cooking mentioned here is even very primitive, often a clay construction with a whole in which the wood will be burned to create the heat necessary for cooking. Not only is this very unsafe, it also is unsufficient to provide the family with desent amounts of food.

- The lack of independency because of small living spaces. Family's are not able to cultivate their own vegetables or fruits to compensate for what they can't affored due to limited financials.