

INTRODUCTION:

It is hard truth that both in developing and under developed countries issues related to maternal Health Care are similar. Both in suburban and rural areas gynecological care is poor as routine checkup be required after conception till childbirth. It is well known that an undernourished mother inevitably gives birth to an undernourished baby, perpetuating an inter-generational cycle of under nutrition. Undernourished girls have a greater likelihood of becoming undernourished mothers. This cycle can be compounded further in young mothers, especially adolescent girls who begin childbearing before they have grown and developed enough. When mothers take only short intervals between pregnancies and have many children, this can exacerbate nutrition deficits, which are then passed on to their children.

METHODOLOGY USED:

In this analysis I tried to use the supervised learning algorithm that are available in the python packages to decipher the most correlating factors for the malnutrition in women by treating the given statistical data relating to every district as an individual data point and thus tried to predict the proportional value of malnutrition in women as such making it as a function of demo-graphical features

RESULTS:

In my analysis of the given data I found the mostly correlated factors for the malnutrition in women which are categorically are as follows:

For WOMEN WHOSE BMI IS BELOW NORMAL ($<18.5\text{KG}/\text{M}^2$) the most correlated factors are as follows:

1. Women age 20-24 years married before age 18 years (%)
2. Women age 15-19 years who were already mothers or pregnant at the time of the survey (%)
3. Female population age 6 years and above who ever attended school (%)
4. Households using clean fuel for cooking3 (%)
5. Population below age 15 years (%)

For WOMEN WHO ARE OVERWEIGHT OR OBESE ($\text{BMI} = 25.0\text{ KG}/\text{M}^2$)²¹ the most correlated factors are as follows:

1. Sex ratio of the total population (females per 1,000 males)
2. Deaths in the last 3 years registered with the civil authority (%)
3. (Women age 15-24 years who use hygienic methods of protection during their menstrual period5 (%)),
4. Births in the 5 years preceding the survey that are third or higher order (%)
5. Women age 20-24 years married before age 18 years (%)

For WOMEN WHO HAVE HIGH RISK WAIST-TO-HIP RATIO ($=0.85$) (%) the most correlated factors are as follows:

2. Sex ratio at birth for children born in the last five years (females per 1,000 males)
2. Households using iodized salt (%)
3. Women age 20-24 years married before age 18 years (%)
4. Births in the 5 years preceding the survey that are third or higher order (%)
5. Households with any usual member covered under a health insurance/financing scheme(%)

POLICY RECOMMENDATIONS:

1. The top most correlating factor in all the three categories which are causing for the abysmal performance of the women on the nutritional front as of the given data is 'Women age 20-24 years marries before 18 years' which suggesting that we should never allow the marriages to be takes place for women without the completion of 18 years of their age for them develop biological to be able to bear the effects after marriages as well for mentally to able to think maturedly as they are introduced to a host of things in the society in this tender age and also their consciousness of social begins to flower in this stage only.

2. The next most common feature contributing to target variable is 'Births in the 5 years preceding the survey that are third or higher order (%)' which suggests that there should be some control, consensus of engaging stakeholders, birth control methods (like

vasectomy, contraceptive pills etc.,) and stature be applied strictly on the frequency and quantity of progeny for the women to be able to improve their BMI and reduce the risk of Hip-Weight ratio thus their overall which in turn compounds as a whole to the well being of the society.

3. The next most correlatin thing is the 'Sex ratio' which kinda seem implicit in the point of pregnancy above but one starkly important factor about this is the societal patriarchal structure and behaviour towards girl child where even though they may be well nourished on a biological front, they may not be getting that kinda growth on the psychological front which sometimes (which is proven to be true by many scientific studies) detrimental to their well being as a whole as such we need to empower the girl child in terms of psychological nurturement, financial fron and also in the erasement of the structural stigmas and structures

4. The next most correlation is the sanitation and usage of clean fuel for cooking and other needs whose relationship seems direct for the well-being of the society as a whole and women in particular since they spend more time than men at home and also in dealing with cooking thing where the old ways of using wood is un-hygenic and not suitable for the well being of women. As our body is made of mostly water, we need to take clean water for all the bodily function to be operated properly as such we need to provide the clean facilities to all the people as much as possible and also there is need to expand the outreach of the clean energy usage for cooking. There also needs to be some programmes that will directly impact, encourage and educate the people for switching to the clean fuel usage and water usage