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Marital Status and Opportunity for Health Among Indian Women: Some Evidences From  
National Family Health Survey – 4

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This paper explores whether ‘marriage’ or in general, marital status affects opportunity for health among Indian women using data from National Family Health Survey (NFHS) – 4. And if affected, it will further explore the underlying reasons behind it. Opportunities in the health dimension will be measured from individual’s achievement considering jointly the level of hemoglobin in blood and BMI (body mass index), which are readily available in the survey data.

NFHS – 4, which was conducted during 2015-2016, covers 699686 women in the 15-49 age-group, out of which 171797 (24.6%) were never in union, 499627 (71.4%) were married, 20408 (2.9%) were widowed, 3112 (0.4%) were divorced and 4742 (0.7%) were separated respectively.

Achievements in the above-mentioned two directions will be explored with respect to the different forms of marital status controlling the effect of ‘type of place of residence’ (rural and urban), religious identities (Hindu, Muslim, Christian and others), social hierarchy, as reflected from caste and ethnicity and other important background characteristics including education (in completed years of schooling) and household wealth (from the so called ‘wealth index’ as readily available in the survey data). Exercises will be done separately in the said two directions as well as for one combined category after appropriate aggregation.

Readings in regard to the level of hemoglobin in blood and BMI need to be classified according to that of the World Health Organisation and / or the Ministry of Health and Family Welfare, Government of India. Well-being in each of these directions does not increase continuously with the readings of the respective variable. In case of the former, the nature of the phenomenon requires treating variable, before analysis, with somewhat trapezoidal function for conversion of the readings, within its acceptable limit, into continuous scores in 0-1 point scale. Methodologically, such an exercise comes under the domain of Fuzzy Sets Theory, where 0 means failure and 1 means complete success with different intermediate positions in between the two extremes. The phenomenon associated with BMI is somewhat different. Up to a certain maximum acceptable limit of the reading in BMI, a trapezoidal function will work fine.

However, it will fail to indicate the negativity of the index on women's well-being beyond its upper acceptable limit. In order to study this specificity of this index, appropriate algebraic formulation is necessary in accordance with that of an inverted 'U' or 'V'.

A preliminary analysis indicates that 48.5% of the Indian women are not anemic, as reflected from the result of level of hemoglobin in blood. Those who are anemic, can again be classified according to three sub-categories: severe (1%), moderate (12%) and mild (38.4%). In regard to BMI, nearly 22% of Indian women belong to the underweight category. Status of 47% is normal. Remaining 31% are distributed in three other sub-categories, such as overweight, pre-obese, and obese, the final of which indicate a morbid condition indicating a negative stage of well-being. Cross-tabulation of results with the previously-mentioned factors and background characteristics give more insight into the problem. For example, when we see anemia according to marital status, nearly half of the women in each category are anemic with comparatively higher concentration among widowed and separated. In case of BMI, among the unmarried women, 33.44% belong to the category of underweight, whereas among the married 17.77% fall in the same category. On the contrary, 3.65% of the unmarried women are obese and the same figures for married and widowed are 6.63% and 7.78%.

As significant variations exist in the achievement of health status in different dimensions, we need to understand how and to what extent opportunities in these directions are affected by marital status of the subject when other background characteristics are held constant. For this purpose, we will present multinomial logit regression analyses revealing the likelihood of achieving success in the said health dimensions by Indian women in the 15-49 age-group across the length and breadth of the Country.