A Socio-economic Study On Women's Scientific Temper In Bengal With Special Reference To Nutritional Concept

ABSTRACT: Scientific temper and cultural systems are relevant for today. Spread of Scientific temper in society is much more important than the spread of science and technology. It is of universal applicability and has to permeate through our society as the dominant value system powerfully influencing the way we think and approach our problems—political, economical, cultural and educational.

In our country, women are the most vulnerable section of the society. Poor nutritional status and health conditions are the most important problems among women. There are many factors behind this unique problem. It is believed that proper science education will be helpful for the improvement of this adverse situation of women. Science education helps to break superstitions and conventional ideas strengthen analytical and logical thinking.

In order to understand the socio-economic status and nutritional condition and effect of science education on women's attitude to life and also scientific temper among women, a sample survey was conducted.

It can be concluded from this study that science education for women has undergone remarkable improvement in recent years. But, in our country, socio-economic status and health and nutrition status's in respect of science education is rather scarce. In West Bengal, there is still much to be done for upliftment of their status in the society.

Scientific temper and cultural systems are relevant for today, because a need is felt for 'fostering scientific temper', with growing religious fundamentalist tendencies the world over and in our country, and the dismal state of our people despite our country having the maximum number of technically qualified people in the world. Diffusion of science and technology into societal fabric at all levels is needed, so that it would foster scientific temper among the people and give rise to a rational attitude.

Geographical, possibly anthropological, and subsequently historical, political and socio-economic conditions govern the course of events, and human development. It has been the same in the Indian subcontinent. It is true that religion has done little to help humanity. Unlike in religion, there is no finality in science, therefore it fosters an open-minded outlook of life. In our society, our attitude should be like scientists. When something is said, who said should not be important, but why is said should be. This is scientific temper. Science possesses reality as the unknown and relies strongly on observation and inquiry as the means of discovery. It denies the acceptance of authority or belief and recommends experiments and investigations. Doubt and inquiry are essential elements of a scientific mind. Non-acceptance of authority is another important ingredient of the scientific temper. It is absurd to talk about 'Hindu Science' being separated from 'American or British Science'. Science does not recognize hierarchy in the pursuit of what is true.

Spread of Scientific temper in society is much more important than the spread of science and technology. Scientific temper is neither a collection of knowledge or facts, although it promotes such more. It is an attitude of mind, which calls for a particular pattern of behavior. It is of universal applicability and has to permeate through our society as the dominant value system powerfully influencing the way we think and approach our problems—political, economical, cultural and educational.

Education, especially science education plays an important role to build up rational attitude. In our country, women are the most vulnerable section of the society. Poor nutritional status and health conditions are the most important problems among women. There are many factors, like socio-economic, environment, gender discrimination and domestic violence against women behind this unique problem. Cultural practices, including nutritional taboos, superstitious believes and harmful food practices deprive women from essential nutrients. It is believed that proper science education will be helpful for the improvement of this adverse situation of women. Teaching science is an important part to foster scientific temper into societal fabric at all levels. From school science curriculum to university research laboratory—it gives rise to a rational attitude. An education in science helps to break superstitions and conventional ideas, strengthens analytical and logical thinking, teaches physiology by explaining functions of the body, and highlights the usefulness of health and hygiene amongst other things. India, like many developing countries spends vast (!) sums of money on nutrition program as well as in science education for women to
promote scientific temper and build up rational mind as it is seen 'children of literate mother never be illiterate'. In order to understand the socio-economic status and nutritional condition and effect of science education on women’s attitude to life and also scientific temper among women, a sample survey was conducted.

The aim of the study was to examine the complex interplay of changing socio-economic factors and nutritional aspects of women’s attitude in the shaping of the status and culture of the science education in West Bengal.

**Research Method**: The women of this study reported here were taken from Kolkata, greater Kolkata (Saltlake, Jadavpur and Garia) and suburban (Sodepur, Belghoria, Baracpur, Ichhapur and Naihati) areas of West Bengal. The study also involved tape-recorded interviews, diet survey format and particular ‘Questionnaire-Format’. In order to understand the socio-economic status and scientific mind towards food fads and nutritional taboos, a sample survey was conducted, covering 345 women. These women from Kolkata, greater Kolkata and suburban, age ranging from 20 to 30 years, married, having children volunteered in this study. The technique of stratified random sampling (for small sample survey) was applied. This study was carried out in winter, 2003.

**Results and Discussion**: Figure 1 presents a profile of the sample survey with respect to their caste composition, family income, educational status and house status and their location.

The highest levels of education received by girls were recorded. 31% have received up to HS (higher secondary) without science where other 23% with science. 19% have completed up to class X. But 27% have not received any education from school. Locations of these subjects are different. 44% women come from suburban, 37% come from greater Kolkata and only 19% is from Kolkata.

Women in India are the most vulnerable section of our society. Malnutrition tends to affect this section predominantly, which is related to socio-economic factors. There is no overemphasizing the fact that overall food availability to the vulnerable section of the society has been very limited and is still showing a downward trend. A number of factors influence the food habits. The health of Indian women is intrinsically linked to their status in society. Indian women have high mortality rates, particularly during childhood and in their reproductive years. Numerous studies indicate that malnutrition is a very serious health concern that Indian women face. It threatens their survival as well as that of their children. Mother’s education, according to the NFHS, is highly correlated with the level of malnutrition among children. Poor health can be improved by a more balanced diet. Generally throughout India, the average food intake of pregnant and lactating mothers is far below that of the average male. Cultural practices, including nutritional taboos, ensure that pregnant women are deprived of essential nutrients, and as a result they tend to suffer from iron and protein deficiencies.

In this study, optimum standards of nutrition were determined on the basis of climate, body weight, sex, nature of work performed and also diet survey. More than half the women in this survey did not get the recommended dietary intake of nutrients.
In our country, all nutritional programs are directed towards the needs of pregnant and lactating mothers. Women face nutritional deprivation from the beginning of the life, at their infancy. Poverty is not the major cause of malnutrition and under nourishment. Socio-cultural values are also operative against women. In this survey, there were no women (particularly from suburban area) whose calorie needs were satisfied and not the protein. Most of the women families took a vegetarian diet due to religion and social taboos and superstition. As example, “hot” foods are to be avoided in summers. Thus some of the best and more than cheaper items of food have a tendency to be left off, e.g., eggs. This improper ‘vegan-Diet’ could be overcome by daily milk intake, but low-income status and food taboos and harmful food practice prevent fulfillment of taking proper diet. The reasons for such taboos are many, but all are steeped in superstition. Many taboos are upheld because it is believed that the consumption of a particular animal or plant will bring harm to the individual. It is also seen from this survey that permanent taboos are placed on women only. There are many temporary taboos that also affect women’s health. Most families have food taboos especially for pregnant women.

**Nutritional Status with special reference to physical stature**

<table>
<thead>
<tr>
<th>Age (Yrs)</th>
<th>Height (Cms)</th>
<th>Weight (Kgs)</th>
<th>Sources of Food</th>
<th>Protein Intake (Gms/day)</th>
<th>Iron Intake (Mg/day)</th>
</tr>
</thead>
<tbody>
<tr>
<td>20-30</td>
<td>152±3.1</td>
<td>54±4.8</td>
<td>Mainly from plants and few from milk &amp; fish.</td>
<td>42±8.3</td>
<td>8±3.1</td>
</tr>
</tbody>
</table>

**List of some harmful food practice/food taboos**

1. Consumption of papaya fruit by women is believed to lead to abortion.
2. Eggs are thought to cause baldness, sterility and hence not consumed by pregnant women.
3. Milk and fish do not take same day, as this combination is poisonous.
4. Adults need no milk.
5. Skim milk has no nutritive value.
6. Brown shelled eggs are not good for health.
7. Infants (1-5 yrs) should be never fed eggs, as they are ‘hot’ foods.
8. Only meat gives energy.
9. Fruit juices do not contribute calories to the diet.
10. Starvation and skip the meal are good for health.
11. Baby food (tinned) is better than mother’s milk.
12. Tonic is good for health than normal food.

These nutritional taboos are unnecessary impositions made on women, who are already malnourished.

It is seen from this study that malnutrition is more in low-income and no schooling group. Rate of proper food intake is less than HS groups. Low income but schooling group shows only 13% malnutrition though improper and harmful food intake normally and during pregnancy is common. Rate of malnutrition is decreased in HS groups. There is no special impact of science education to take proper food intake both in normal time and during pregnancy. Though the rate of proper food intake during pregnancy is increased in no schooling group than schooling group but the harmful nutritional beliefs and practices remain same.
It is important to note that malnourishment among women is observed in all economic classes. It is not a result of poverty only but more a result of discrimination by gender and poor knowledge about nutrition and dietetics that are related to food taboos also. Women also suffer from some of the female specific health problems and add to the sickness load in addition to the health problems related to some female abnormal and gynecological problems. Continuous tobacco (mainly cigarette and bidi) smoking among family members and poor ventilation system of the rooms (esp. kitchen) may also adverse effects on their health status.

It is well known that early pregnancy can have harmful consequences for both young mothers and their babies. According to UNICEF, no girl should become pregnant before the age of 18 because she is not yet physically ready to bear children.

But in this study, it has clearly shown that 60% women had been married before the age 18 and most of them gave birth to one – two children within 18-20 years. Women’s attitude to their own girl children is also biased. The result is nutritional discrimination against girls. Their mind set up is not changed though they have got science education in school or college level. Scientific temper is absent among them. The role of science education among women is very frustrating despite India having the largest scientific manpower. Indian science flourished initially in the immediate post independence era, but modern Indian science establishment is now struggling to survive in the University’s Science Departments. The feudalistic mindset, consequent authoritarianism and no scientific temper among science people cause this decline in science. The ongoing science education is limited on textbook only and not fostering into people. This has serious implication on science culture of Bengal and also on women’s health and other socio-economic problems.

<table>
<thead>
<tr>
<th>Location of House</th>
<th>Education</th>
<th>Income of Family</th>
<th>No. of Children</th>
<th>% of women</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kolkata</td>
<td>HS(Sc.)/HS</td>
<td>Variable</td>
<td>One</td>
<td>17</td>
</tr>
<tr>
<td>Greater Kolkata</td>
<td>HS(Sc.)/HS</td>
<td>Variable</td>
<td>One or two</td>
<td>37</td>
</tr>
<tr>
<td>Greater Kolkata</td>
<td>No Schooling</td>
<td>Low</td>
<td>Two or three</td>
<td>39</td>
</tr>
<tr>
<td>Suburban</td>
<td>No Schooling</td>
<td>Variable</td>
<td>Two or three</td>
<td>45</td>
</tr>
<tr>
<td>Suburban</td>
<td>Schooling</td>
<td>High</td>
<td>Two or three</td>
<td>28</td>
</tr>
<tr>
<td>Suburban</td>
<td>Schooling</td>
<td>Low</td>
<td>One or two</td>
<td>15</td>
</tr>
</tbody>
</table>

**Women’s status with having children**

**Conclusion** : It can be concluded from this study that science education for women has undergone remarkable improvement in recent years. But, in our country, socio-economic status and health and nutrition status’s in respect of science education is rather scarce. There is a clear relationship between education and position of women. But, lack of proper nutritional knowledge (due to existing education systems), gender discrimination and poor economic condition may be a factor for poor science culture among women in particular and people at large, which in turn has lead to adverse effect on their health and social position. Highly, agricultural and privatized industrial society of our country does not get more social welfare. The changing ‘economy’ after globalization converts situation unstable and is becoming unsafe for women day by day. Remember the saying “Give man a fish and you feed him for a day; teach him to fish and you feed him for life”. The same applies both in science and in science communication. Providing access to information is only half the battle. Meeting the first of these needs means building indigenous infrastructure, from school science curricula to university research laboratories. In West Bengal, though we have recognized freedom, expression and physical movement by women, there is still much to be done for upliftment of their status in the society. We cannot ignore the basic needs of a woman. There is a long way to go, but at least the way forward is becoming clearer.

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Received : 29 November, 2010

7 Harmful Traditional Practices Affecting the Health of Women and Children, A Report From DESA, United Nations High