Disparities in Gender Empowerment and Gender based Violence: A Spatial Study in the Districts of West Bengal, India

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Abstract: Gender inequality continues to be a social issue despite changing mode of production in the Indian context. Level of such inequality is generally measured in terms of disparity in certain selected empowerment parameters for both men and women. Gender disparity is not ubiquitous throughout West Bengal due to intra-regional socio-economic setting. The core research question raised and answered through this academic endeavour is how disparities in these selected parameters affect gender-related violence. Despite attaining certain stage of empowerment through education and work participation, every three minutes a lady is abused in West Bengal. The State also tops the list of domestic violence in India. Therefore, this academic endeavour based on secondary data from National Crime Records Bureau and other Government sources, addresses the spatial variation in women empowerment as well as incidences of violence against them in the districts of West Bengal.

Key words: intra-regional socio-economic setting, empowerment parameters, domestic violence,

Introduction: Empowerment is a socio-economic tool which enables freedom of making choices and decision. However, empowerment is not bestowed on birth rather it has to be achieved through various sanctioned ways provided by hard and soft infrastructures of the country. According to a report of the Institute of Development Studies, University of Sussex, which cites Suzanne William’s work, the idea of empowerment is rooted in the sense of power or authority. Such power may be realized through power over relationship of domination. It is based on resistance of threats of violence and fear; power to decision making; power with people involved in organization to achieve collective goals; and ultimately power within which involves self-awareness and confidence generated out of it (Oxaal, 1997). Achieving such empowerment is not easy and is slowed down by socially designed hindrances to which the disadvantaged class falls prey. Gender bias is one of these socially constructed hindrances because of which ubiquitous distribution of empowerment is not possible. The Indian society in general and that of West Bengal is characterized by strong patriarchal culture, where there is considerable level of disparity in the empowerment based on gender preferences. At the same time such disparity in terms of gender development and consequent empowerment many a times act as covert agent of gender related violence. The present work seeks to address the various dimensions of such disparity through gender lenses in three aspects which are supposed to be the tools of empowerment. These dimensions of empowerment include: (a) involvement in higher and technical education, (b) participation in substantive work force and (c) participation as people’s representative in political administration.

As mentioned earlier, empowerment involves power that enables to resist threats to violence. Hence, empowerment of women supposedly should make them resilient enough to stop violence against them. Therefore, the second research question stands as whether empowerment of gender makes them strong enough to protect themselves from domestic atrocities.

Although, promotion of gender equality is undoubtedly necessary for violence prevention as per WHO report (2009), however, the relation between the two is complicated as will be reflected through the following discussion.
Rationale and Limitations of the Study: In recent years, there has been an alarming rise in the incidences of domestic violence.

Districts under Administrative Divisions of West Bengal

In 2015-16, according to the estimates of the National Crime Records Bureau, the State of West Bengal tops the list of domestic violence against women under Section 498A of the Indian Penal Code (IPC) i.e. cruelty on women by husband and relatives of her husband. However, at district level there is considerable variation of the incidences of domestic violence. Bengal had been the hearth of enlightenment and oriental Renaissance which was initiated in the 19th century. Most of the social reform movements involving women education and upliftment of their social status had started from the then undivided Bengal. So, it is thought provoking to make a comparative spatial probe on the present status of empowerment of women at different regions of the State. For this reason, West Bengal has been chosen as the study area. In 2017, there are 23 districts in West Bengal. But because, the database for the current research is based on Census 2011, only the then 19 districts have been considered for the study. Three of the newly formed districts were added only in 2017 while one district was added in 2015. So, no Census based data for the newly created districts were available. Hence, spatial analysis of these four districts could not be performed. This is one of the major limitations of the present study.

Objectives of the Study: The present paper attempts to fulfil the following objectives:

✓ To assess the district-wise spatial disparity of some selected parameters of Gender Empowerment through the given dimensions
✓ To study the district-wise spatio-temporal variation of domestic violence
✓ To compare the gender-development oriented empowerment indicators and atrocities against women in the districts of West Bengal

Materials and Methods: The present work is based on secondary database from various government sources. There are two sections of the study: gender empowerment and gender related violence. For gender empowerment three variables have been considered:

(a) Participation in higher and technical education- Here district-wise male and female technical degree holders and graduates and above have been considered for the Census year 2011. Literacy rate is a common tool to measure basic level of development for a developing country. However, mere ability to read, write or do simple arithmetic does not ensure ‘empowerment’. In fact, higher and technical job oriented education is more likely to offer better employment opportunities and financial freedom earned out of it, should offer freedom of choices as well as decision making. So, involvement in higher and technical education has been used as a tool for measuring empowerment.

(b) Participation in work force- Here district-wise male and female main workers have been considered out of Census 2011. It is usually observed that main substantive workers earn more than the marginal or seasonal workers because the number of working days for the former category is very high. Higher income provides better financial strength with which other sorts of powers may be accessed. Hence, this is considered as the second tool for empowerment.
(c) Participation in political administration- Here district-wise male and female Members of Legislative Assembly (MLA) have been considered from the list published by West Bengal State Legislative Assembly. There is no gender based reservation for the number of seats for getting elected to Legislative Assembly, unlike the Panchayat or lowest rung of local self-governance in the rural India, where there is 50 per cent reservation. So, for unbiased assessment of how much of authority women in West Bengal enjoy to represent people in the provincial and national affairs may be understood from the male-female ratio of MLAs.

Education and employment are the two basic tools which can change the economic and social status of women over a long run (Raj, 2014), apart from political participation which enables placing voices and opinion thereby facilitating decision making power in hands of women. Hence, these three crucial variables have been considered.

For each of these variables, both male and female counterparts have been selected because to measure gender disparity and unbiased gender classes have to be taken into consideration. Moreover, unless the male fraction is not considered, level of gender bias against women cannot be gauged. With these variables Gender Empowerment Index (GEI) has been prepared. GEI is an un-weighted average of the Equally Distributed Gender Empowerment Indices. It shows how equally (or unequally) selected parameters are distributed among men and women. It is calculated in following steps:

In the first shape male and female share of population for each of the parameters have been considered using the formulae-

\[
\text{Female Share} = \frac{\text{Female Population}}{\text{Total Population}}
\]
\[
\text{Male Share} = \frac{\text{Male Population}}{\text{Total Population}}
\]

In the second step, female and male indices for each of the aforementioned parameters have been considered for standardization of the absolute values using the following formulae-

\[
\text{Female Index} = \frac{(\text{Actual Value} - \text{Minimum Value})}{(\text{Maximum Value} - \text{Minimum Value})}
\]
\[
\text{Male Index} = \frac{(\text{Actual Value} - \text{Minimum Value})}{(\text{Maximum Value} - \text{Minimum Value})}
\]

In the third step Equally Distributed Index (EDI) is calculated on the basis of male-female share and male-female indices using the following formula:

\[
\text{Equally Distributed Index} = \frac{\text{Female Share} \times \text{Male Share}}{\text{Female Index} \times \text{Male Index}}
\]

In the final step, Gender Empowerment Index (GEI) is calculated by average of equally distributed indices of three parameters taken into consideration.

\[
\text{Gender Empowerment Index} = \frac{\text{EDI in Higher Education} + \text{EDI in Work Participation} + \text{EDI in Political Participation}}{3}
\]

The second part of the work includes violence against women. For the present case district-wise domestic violence—for which the State has very high records has been taken into account. The data source is Crime India—the annual crime statistics published by the National Crime Records Bureau. District-wise decadal ranks of domestic violence have been mapped for the years 2001 to 2015 on the basis of highest to lowest incidences. The district with highest incidences of domestic violence has been ranked one and in descending order other districts have been ranked. Thereafter, standard score measure has been put to use to find how much deviation from mean takes pace for each of the district using the formula:

\[
\text{Standard Score} = \frac{X - X_{\text{mean}}}{\sigma}
\]

Analysis of variance (ANOVA) has been used to find whether there is significant variation among the districts in case of both gender empowerment as well as atrocities against women or not . Finally Pearson’s product moment correlation coefficient is used to find any significant correlation between district-wise gender empowerment index and incidences of crimes against women.

Major Findings and Discussion

Spatial Disparity in Access to Higher Education: District-wise Equally Distributed Index (EDI) for each of the empowerment dimensions have been calculated and depicted through Fig. 2, 3 and 4. EDI for participation in the higher education is high in districts with high urban intensity like Kolkata and
North 24 Parganas. Urban intensity may be formulated as $\sqrt{\frac{x + y}{2}}$, where x is the percentage proportion of urban population in district and urban population in State; while y is the percentage proportion of number of towns in the district and number of towns in the State.

So, in urban nuclei of North 24 Parganas and Kolkata more or less equitable distribution of the two genders in participation in higher education is found. This also implies that there is less gender disparity in these two districts and hence, gender empowerment is more likely in such areas. Barddhaman is second in the league in this regard. But, EDI of Barddhaman in higher education is much lesser than that of Kolkata or North 24 Parganas. The districts of the Jalpaiguri Division have abysmally low record in equal opportunities for higher education. In general human development had been very low in these districts, especially for Uttar Dinajpur, Dakshin Dinajpur and Maldah which had very low Human Development Index (HDI) according to West Bengal Human Development Report, 2004. These districts had HDI below 0.500. Apart from Barddhaman district, other districts in the Barddhaman Division had low values of EDI in higher education, owing to development of Barddhaman, Durgapur and Asansol of census category class I urban nodes in Barddhaman district and absence of the same in other districts of the said Division. Similarly, in Presidency Division the districts with high rurality display low values of EDI in higher education. It may be commented that, equity in higher education is found at or near the cores of urban development. Higher education demands soft infrastructural development, which is possible only in big cities. The distance decay effect away from major urban centres is most vividly observed in case of equal access to higher education.

**Spatial Disparity in Work Participation:** The main workers are the substantive participants in the work force. The district of North 24 Parganas has the highest EDI; while Barddhaman, Hugli, Murshidabad and Nadia exhibit moderate values of EDI. The EDI for participation in work is very low in the northern and western districts of the State. Surprisingly, Kolkata the most urbanized part of West Bengal has lesser equality of the genders in terms of participation in the workforce.

Presently, urbanization in West Bengal has shown a spatial shift in the North 24 Parganas. Municipalities are on the rise in this district which has enhanced nuclear households which in turn has generated the demand for participation of women into the workforce. Lesser value of EDI in work participation indicates two possibilities:

- There are lesser employment facilities which are conducive for women to participate.
This is a reflection of patriarchal set up where the scope of women employment is limited and their access to economic productivity space is restricted.

In the districts where the EDI relating to higher education is appalling, there EDI for work participation as main workers is also considerably low. Participation as main workers requires either skill oriented training or higher education. In districts like Puruliya, Birbhum, Malda, Uttar and Dakshin Dinajpur EDI for participation in both higher/technical education as well as main workers are very low.

**Spatial Disparity in Political Participation:** The districts of North and South 24 Parganas have very high score in participation in political activities/leadership. This implies that number of male and female MLAs is more or less equal. Kolkata, the State capital has extremely low EDI in this parameter of empowerment. The gender equality in becoming people’s representative in a federal system is very significant in gender empowerment. It is one of the most empowering tools that ensure social and distributive justice in decision making. However, a strong male preference is observed in the promising capital district as well as backward districts of Puruliya, Darjiling, Koch Bihar, Uttar and Dakshin Dinajpur. This is evident from higher number of male MLAs in the constituencies of these districts. Moreover, the political space is also restricted for women in parts of the State due to social taboos associated with it.

**Spatial Variation in Gender Empowerment:** Combining all the three parameters for which EDI has been calculated, an un-weighted average has been derived for each of the districts.
districts which has been termed as the Gender Empowerment Index (GEI). As evident from the Fig.5, North 24 Parganas district has the highest GEI in the State. This is most likely because this district had displayed high EDI in all the three parameters viz, participation in higher/technical education, participation in workforce as main workers as well as political participation. This is most clearly the effect of urban development. In fact, the district of Bardhhaman also displays moderate level of GEI attributed by important market node and administrative centre of Barddhaman town; and industry induced urban development in Durgapur and Asansol Municipal areas along with host of other towns in the central and western parts of the district which distinctively vary from the eastern part. Moderate GEI in Hugli, Murshidabad and Paschim Medinipur are attributed by participation in the workforce and political affairs. Gender equality for participation in higher education is considerably low in these districts; while, in South 24 Parganas district, moderate GEI is almost entirely attributed by political participation. Kolkata the State capital also has moderate level of GEI because very low EDI in political participation and workforce has reduced the total GEI. A large number of districts in West Bengal covering the western and northern parts having large sections of tribal pockets and regional under development have very low GEI indicating gender disparity at large scales.

Such spatial variability of gender empowerment as measured by GEI may be statistically explained through ANOVA. Here, variability of GEI among the districts grouped into three administrative division viz. Jalpaiguri, Barddhaman and Presidency Divisions have been analyzed. Significant variation is found between Jalpaiguri and Presidency Divisions at 0.05 level of significance. ANOVA of GEI in administrative divisions and districts of West Bengal may be summarized as follows:

<table>
<thead>
<tr>
<th></th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>0.507</td>
<td>2</td>
<td>0.253</td>
<td>7.475</td>
<td>0.005</td>
</tr>
<tr>
<td>Within Groups</td>
<td>0.542</td>
<td>16</td>
<td>0.034</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>1.049</td>
<td>18</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Data source: West Bengal Primary Census Abstract, 2011 and West Bengal State Legislative Assembly List

The Fisher (F) statistic being 7.475 at significance level 0.005 is considered to be valid as the p value or Sig.is less than 0.05. This implies that there is significant difference in empowerment of women between the administrative divisions as well as within the districts.

It may also be commented that urbanization as measured by urban intensity index has a very significant and positive correlation with GEI. The Pearson’s Product Moment Correlation coefficient in this case is 0.871(significant at 0.01 level). This implies that level of urbanization and urban centric
developments influence gender equality or disparity.

**Spatial Variation in Incidences of Domestic Violence and Comparison with Gender Empowerment:**

Fig. 7 shows the district-wise variation of standard score values of the incidences of domestic violence superimposed upon the GEI values. It is evident that the districts sharing borders with Bangladesh, viz. South 24 Parganas, North 24 Parganas and Murshidabad have very high standard score values for incidences of domestic violence. This indicates that these districts record incidences of domestic violence more than the average of such incidences occurring in the State altogether. Again, a large number of districts including Jalpaiguri, Koch Bihar, Uttar and Dakshin Dinajpur, Malda, Puruliya, Bankura, Birbhum, Paschim Medinipur, Hugli and Kolkata record incidences of domestic violence lesser than the State average as evident from the low status of their standard score value. Darjiling records very low incidences of domestic atrocities. Haora and Nadia district displays standard score of such incidences closer to the State average.

Spatial variability of domestic violence has been statistically explained through ANOVA. Here, variability of incidences of domestic violence among the districts has been grouped into three administrative division viz. Jalpaiguri, Barddhaman and Presidency have been analyzed. Significant variation is found between Jalpaiguri and Presidency Divisions along with Barddhaman and Presidency Division at 0.01 level of significance. ANOVA of incidences domestic violence in administrative divisions and districts of West Bengal may be summarized as follows:

**Table 2: ANOVA for Incidences of Domestic Violence**

<table>
<thead>
<tr>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>11.000</td>
<td>2</td>
<td>5.500</td>
<td>10.998</td>
</tr>
<tr>
<td>Within Groups</td>
<td>8.002</td>
<td>16</td>
<td>0.500</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>19.001</td>
<td>18</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Data source: NCRB, 2001-2015*

The Fisher (F) statistic being 10.998 at significance level 0.001 is considered to be valid as the p value or Sig. is less than 0.05. This implies that there is significant difference of incidences of domestic violence between the administrative divisions as well as within the districts.

But the paradox lies in the fact that districts with high GEI values especially North 24 Parganas and those with moderate values of the same are the hotspots of domestic violence as well. The GEI value being high in these districts makes the women strong enough to ensure safety and resilience against torture within the domicile especially attributed by high EDI in higher education and substantive employment. High EDI in political participation, although not directly, but indirectly should serve as a strong platform for voicing the feministic demands and complaints. But the results of the study are utterly shocking to reveal that neither education nor economic freedom could ensure ‘power’ or freedom to protect themselves. There may be three basic causative factors contributing to such paradoxical result, which include:

- ✔ The districts have been considered as a whole. The victims may be from the pockets of under development within the district and the high EDI and GEI contributing factors may concentrate only in the urban pockets. This is more likely because of such strong correlation between urban intensity and GEI. This also indicates that within the districts empowerment is not ubiquitous and a large degree of intra-district spatial disparity centring rural-urban divide exist.
- ✔ In districts with low GEI, may be there is large number of unreported cases of domestic violence which actually lowers the number of reported incidences of crime. In fact, under development and low gender empowerment may stand as a hindrance for the victims to lodge complaints against violence, which the victims belonging to districts with higher or moderate GEI are enable to do.

**District-wise Spatial Variation of Incidences of Domestic Violence and Gender Empowerment Index, West Bengal**
Oppression on women, especially at domestic level may be seen as social resistance to their empowerment in a patriarchal setup. Access of women to public space especially economic-scape often render men insecure of their age old dominance, hence they take up violence against the second gender to resist their equal standing. In this regard Mathur and Salvov opine that husbands view empowered wives as a threat to their own status, provoking more retaliatory violence (Mathur and Salvov, 2013).

There also exists significant and positive correlation between gender empowerment index and standard score for domestic violence. This implies that with high GEI values, deviation from average incidences of domestic violence also increase and vice-versa. This further corroborates the fact that districts of high GEI values are also the hotspots of domestic violence. In this particular case the Pearson’s product moment correlation coefficient stand at 0.818 with 0.01 significance level as understood from Fig.8.

![Graph showing correlation between Gender Empowerment Index and Incidences of Domestic Violence](image.png)
Concluding Remarks: From the foregoing discussion and ANOVA results displayed in Table 1, it is evident that there is considerable level of spatial disparity of selected gender development parameters and empowerment resulting out of it at district level in the State of West Bengal. The linear correlation of urbanisation through urban intensity and gender empowerment index so constructed for the districts, reveal that empowerment centres on urban areas of the State. Thus a marked rural-urban divide seem to be a formidable force which influences such district level disparity in gender related empowerment.

The latter part of the discussion involves gender related violence at family level. The present endeavour reveals that established measures of gender empowerment do not actually bestow women with ‘power’ or freedom from violence as observed in the contradictory results wherein districts with higher empowerment index are also the seats of domestic violence. Yet the very first concept of empowerment as proposed by Oxaal et.al deals with power over relation and resistance to violence. Women in West Bengal are most insecure and inert within the domicile. Even in case of familial decision making, they are guided by patriarchal mind set for which consequences are never in favour of women themselves. Incidences of domestic violence are examples of such patriarchal psychology. Most of the offenders of domestic violence are women who are guided by male chauvinistic outlook of social resistance against the victims. Thus, despite opportunities of education or employment basic human rights of women are often curbed. At the same time, unequal women representation in the State level political administration result in suppression of feministic voices and opinions. Here also, male dominated psychosis induced political ideologies prevail. However, a major reason for such an enigma is as mentioned before, non-reporting of domestic violence is a consequence lack of awareness, curbed self-reliance for the districts scoring low gender-empowerment index.

Thus, it is quite clear that existing parameters of gender development and related empowerment are actually becoming futile to ‘empower’ women in the level of realization of the term. Thus, ubiquitous representation of women in the administration, economic sectors along with promotion of feministic ideals in decision making is necessary to reduce violence against women.

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