CONCLUSION

On the basis of overall analysis of the study the following important inferences may be drawn pertaining to the spatial dimensions of food insecurity and child labour, consumption pattern of food items, characteristics of food secure, insecure and child labour households and causal relationship between food insecurity and child labour in Aligarh city:

Spatial Dimensions of Food Insecurity and Consumption Pattern of Food Items

I. More than one-half of the total sampled households of the city were food insecure in which 25.87 per cent of the households were severely food insecure and remaining 26.63 per cent were found moderately food insecure. Only 47.50 per cent of the total households of the city were found food secure. There were six wards namely; Shahjamal (65.12 per cent), Bhujpura (62.64 per cent), Slaughter House (61.65 per cent), Jeevangarh (58.51 per cent), Khai Dora (58.82 per cent) and Maulana Azad Nagar (56.67 per cent) have been recorded under the category of high level of food insecurity. This high percentage of food insecure population in the vulnerable wards of the City is the result of their low income and poor purchasing power of the population.

II. The ratio of casual labourers was substantially higher than the salaried, regular and self-employed workers in the city. In casual labourer category, the share of female exceeded to the male, while, among self and regular employment, the situation was reversed.

III. The main sources of drinking water of the resident population of the city were hand pump, submersible, piped water connection and road side piped water connections, among which, nearly two-fifth of surveyed households were getting drinking water from their own hand pumps.

IV. The prevalence of Chronic Energy Deficiency (CED) among children population was significantly higher than the adult population of the sampled wards of Aligarh city in which female outnumber male population in both the cases.

V. More than two-fifth of the total population of sampled wards of Aligarh city reported for cereal consumption which was more than the standard requirement (420 g/person/day) and about two-third sampled households reported that they had low access to pulses (below 40 g/person/day) due to its high price.

VI. The consumption status of vegetables, milk and meat was quite alarming that 21.12 per cent of the total population of sampled wards could not afford to access the
required amount of vegetables and less than two-third population had access to milk, but less than the standard requirement (150 g/person/day), while more than one-half of the sampled population of the city consumed meat below than the standard requirement in their daily diet.

**Socio-economic Characteristics of Food Secure and Insecure Households**

I. The percentage share of other backward caste (71.73 per cent) and scheduled caste (2.60 per cent) population were higher in food insecure households than that of food secure households which accounted to 64.64 per cent and 9.46 per cent respectively.

II. The ratio of juvenile dependents was found relatively higher among food insecure households than that of food secure households, while, the situation was totally reversed in the age group 15-59 which is economically active and working age population.

III. The proportion of small and medium household size was found more in food secure households as compared to the food insecure households. Contrary to this, the percentage share of large household size having 8-10 members was nearly double among the food insecure households than that of food secure household.

IV. Among food secure households, the proportion of illiterates was lower i.e. 47.00 per cent as compared to food insecure population that is 66.62 per cent. In addition, the level of illiteracy in females was observed relatively higher both in food secure as well as food insecure households than that of their counterparts.

V. In food insecure households, majority of population engaged in casual works and worked as labourers (29.94 per cent) who were not regular employed followed by workers in lock industries (28.51 per cent) and worker in other household industries. On the contrary, among food secure households, majority of population i.e. 31.15 per cent engaged in lock manufacturing followed by labour class (14.52 per cent), other household industry (14.05 per cent), business (10.54 per cent) and mechanic (6.09 per cent).

VI. The percentage share of population in food secure households engaged in business activity was considerably higher as compared to food insecure households (2.65 per cent). Similarly, proportion of mechanic, retail traders, employed in any institution/Government organization were witnessed low in food insecure households than that of food secure households.
VII. It may be also inferred that moderately food insecure households involved in formal occupation were in better position than that of severely food insecure households who were engaged in informal sectors.

VIII. The monthly income of food secure households was better than the food insecure households.

IX. Among food insecure households, nearly two-fifth households were living in *pucca* house, while, in food secure households, more than three-fifth households were found living in *pucca* houses. The percentage share of food secure households using houses as residential purposes was 64.64 per cent which was higher than food insecure households (53.15 per cent) whereas, the proportion of houses used as residential with industrial, residential with commercial and mixed activity (residential with industrial and commercial) were to some extent high in food insecure households as compared to food secure households.

X. Nearly, three-fifth sampled households of the selected wards of the city do not have proper ventilation in their houses that comprising of 50.89 per cent in food secure and 65.11 per cent in food insecure households respectively. Likewise, in food secure households, proportion of households with no open spaces was 50.54 per cent which was lower in proportion as compared to food insecure households (63.49 per cent).

XI. The proportion of households having road side hand pump (44.10 per cent) and roadside piped water/public tap (13.89 per cent) was higher among food insecure households in comparison to food secure households. In addition, the ratio of food insecure households that have to fetch water beyond the premises of their houses has been naturally greater than the food secure households.

XII. The percentage of households having toilet facility outside the houses was higher in food insecure households than that of food secure households. Among food secure households, majority of households (80.71 per cent) have flush/septic type of toilets, while, among food insecure household, more than one-third of the households have reported manual type of toilets in their houses.

**Child Labour Households and their Characteristics:**

I. More than one-fourth (27.28 per cent) of the total sampled child population of the city was found as child labours in which the male dominates over female.

II. The share of children attending school was quite high in food secure households than the food insecure households. Contrary to this, the proportion of children who were
working, working with studying and idle was high in food insecure households as compared to food secure households.

III. The highest concentration of population of working children (44.01 per cent) in the city was found in the age-group of 10-14 and their proportion was nearly two times higher among food insecure households than that of food secure households.

IV. Lock manufacturing was the prime occupation of the working children in Aligarh city that shared about 45.05 per cent of the total child labour population followed by petty retail traders, domestic workers, household industry workers, mechanic, rag pickers, workers in other’s shop, embroiders, vender, dhaba workers, handicraft workers and rickshaw pullers.

V. Masculine gender dominates over feminine gender among the paid workers and vice versa among the unpaid child labour households.

VI. The share of studying children was relatively higher among the sampled households of food secure as compared to the food insecure. As far as drop-out population was concerned, the maximum number of drop-out children has been registered among the food insecure households (22.52 per cent) as compared to food secure households (13.15 per cent).

VII. Child labour in food insecure households (49.64 per cent) was more economically motivated as compared to food secure households (34.94 per cent). Children working in food insecure households were more vulnerable because of their circumstantial compulsion. They were working mainly because of poverty, low income, large family size etc., while, children in food secure households were pushed to work mainly due to traditional attitudes, parental illiteracy and to save children from bad habits and company.

VIII. On an average, out of total sampled households (1179) nearly, 44 per cent households having child labours in Aligarh city. Moreover, the highest proportion of households having child labour was found in Shahjamal i.e. 67.44 per cent and lowest in Pala Sahibabad (31.18 per cent). Besides it, more than half of the households were found having child labourers in the wards, namely, Usman Para III (63.41 per cent), Bhujpura (62.64 per cent), Khai Dora (61.76 per cent), Sarai Kaba (54.39 per cent), Maulana Azad Nagar (51.11 per cent) and Kala Mahal (50 per cent). Except, Maulana Azad Nagar, all wards with high concentration of households having child labourers were situated in the old part of the city and lock manufacturing is the traditional occupation of the people since a large span of years.
IX. The proportion of child labour among Muslim households was comparatively higher than that of Hindu households. In addition, a large percentage of child labour households were from backward classes and reflect the fact that they live in poverty.

X. More than two-fifth of the total sampled child labour households having 5 to 7 members in their family.

XI. More than one-fourth of the total sampled child labour households of the city were literate and among these literates, 17.80 per cent were educated up to primary level.

XII. The per capita monthly income of more than two-third child labour households was up to Rs. 1000 only.

XIII. Nearly, one-fourth of the total child labour households were reported as migrant population and the major difference between the migrants households of inner and outer wards of the city was the duration of migration, the inner wards migrants has been stayed in the city for more than five years, while, the outer ward migrants were the recent new comers or their period of stay in the city was less than 5 years.

Causal Relationship between Food Insecurity and Child Labour

I. Bhujpura, Shahjamal, Slaughter houses and Maulana Azad Nagar were the most deprived wards in terms of overall food availability index of the city, while, the wards namely SaraiGarhi, NaglaMasani, RasalGanj, NaglaJamalpur, Kala Mahal, Indira Nagar KhairRoad, Dori Nagar and Firdaus Nagar were found in better position.

II. On the basis of vulnerability score in terms of accessibility index, Slaughter houses ranked at highest position, followed by Bhujpura, Shahjamal, Khai Dora, Maulana Azad Nagar and Jeewangarh, whereas, Indira Nagar Khair Road with a composite score index (0.204) stands at the lowest position among all the sampled wards of Aligarh city.

III. The five wards viz., Shahjamal, Khai Dora, Kala Mahal, Bhujpura and Jeevangarh were most vulnerable in terms of housing condition in which Shahjamal ranks at the top and Firdaus Nagar ranks at the lowest position in the city.

IV. Considering overall sanitation index, Slaughter House, Shahjamal, Bhujpura and Pala Sahibabad were most deprived, while, five wards namely Rasalganj, Sarai Garhi, Nagla Masani, Nagla Jamalpur and Sarai Kaba were least vulnerable wards in respect of sanitation index of Aligarh city.

V. Shahjamal, Bhujpura, Slaughter Houses, Maulana Azad Nagar, Usman Para III and Sarai Kaba were most vulnerable in terms of nutritional outcome index as compared...
to the wards of Nagla Jamalpur, Sarai Garhi, Nagla Masani, Dori Nagar, Rasalganj, Kala Mahal and Firdaus Nagar.

VI. Bhujpura was found to be most food insecure wards that ranks as first followed by Slaughter Houses, Shahjamal and Maulana Azad Nagar. On the other hand, Sarai Garhi, Nagla Masani, Rasalganj, Nagla Jamalpur, Kala Mahal and Indira Nagar Khair Road were found to be better in terms of overall urban food insecurity index.

VII. Among all the selected indicators of food insecurity and child labour, concentration of child labour \((X_1)\) was strongly positively correlated with food insecure population at 99 per cent level of confidence. In addition, the direct factors contributing and responsible for prevalence and perpetuation of child labour were continued poverty, fear of food insecurity, illiteracy, low family income, large family size, the tradition of making children to learn the family skills, un-employment/under-employment etc.

VIII. Food availability index has strong positive correlation with the food accessibility index, housing index, sanitation index and nutritional outcome index at 99 per cent level of confidence and with concentration of child labour \((r=.537)\) at 95 per cent level of confidence. It means deprivation in food availability raise the issue of child labour.

IX. Likewise, food accessibility is significantly associated with housing index, sanitation index, nutritional outcome index and child labour \((r=.631)\) at 99 per cent level of confidence. So, it may be noted that indicators of food accessibility such as population below poverty, casual labourers, illiteracy etc are strongly related to incidence of child labour as well as other dimensions of food insecurity- housing, sanitation and nutrition.

X. Housing index was strongly positively associated with concentration of child labour \((r=.631)\), sanitation \((r=.695)\) and nutritional outcome status \((r=.684)\) at 99 per cent level of confidence while, sanitation index has strong positive relation to nutritional outcome \((r=.625)\) at 99 per cent level of confidence and also positively correlated to concentration of child labour \((r=.288)\) but not up to significant level.

XI. Nutrition outcome indicators of food insecurity i.e. chronic energy deficiency and acute and chronic illness have also positive and linear relationship, but not significantly correlated with child labour population.

XII. Food insecurity and child labour have positive and linear relationship with a regression value of \((R^2=0.622)\) means that 62.2 per cent variation in dependent variable i.e. concentration of child labour can be explained by the independent or predictor variable that is food insecure population. Nevertheless, lack of food

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availability ($R^2=0.372$), food inaccessibility ($R^2=0.293$), lack of food absorption or utilization ($R^2=0.493$) and deprivation in nutrition & health ($R^2=0.580$) have also positive and linear relationship with child labour in the city.

XIII. Among all selected wards, Shahjamal comes under the high category of both food insecurity and concentration of child labour, whereas, Indira Nagar Khair, Sarai Garhi, Dori Nagar, Nagla Masani, Rasalganj, Firdaus Nagar and Nagla Jamalpur come in the category of low level of food insecurity and low child labour concentration as compared to other sampled ward of Aligarh city.

**Suggestions:**

1. It was observed during the survey that problem of food insecurity in the study area was the outcome of poor accessibility rather than the non-availability of food which was mainly due to their lack of awareness, poor standard of living, illiteracy, unemployment and corrupted PDS system. Hence, it is the need of hour that government and non-governmental agencies should emphasise those policies which create awareness among the ignorant people about the different dimensions of food insecurity and simultaneously, tried to review again all the loopholes in the governmental schemes pertaining to PDS system, poverty alleviation and employment generating programmes.

2. More than two-fifth sampled population of the vulnerable wards of the city were living in below poverty line and hence, especial focus has to be given by the government in providing better employment opportunities according to skill and knowledge of the targeted beneficiaries that raised their standard of living and improved the livelihood status of the poverty afflicted community rather than to provide subsidy or food only at reasonable rates.

3. Another drawback with the population of sampled population is the consumption of same type of food at regular interval or wrong dietary habits that required especial attention of the planner in order to create awareness among the community and provide correct information to them about consumption of different food items according to their standard calorie requirements.

4. One of the reasons for failure of the PDS and high level of food insecurity in Aligarh city is the poor execution of PDS system; consequently, the needy people do not have ration cards. Therefore, the poor households of the city required the effective
implementation of PDS system and regular monitoring about the number of households which have no ration cards. Besides, at regular intervals, government should listed the real beneficiary of BPL and APL card holders in their defined municipal boundaries. Nevertheless, the allocation of food items per household in PDS should be based on the number of consumption units in the household. Besides rice and wheat, other relevant and nutritious food grains and pulses may also be distributed through PDS at subsidized rates, in order to enhance nutritional outcomes. In addition, poor migrants should also be allowed to access PDS distribution in the area where they work.

5. Our society is gender biased society, as a corollary, the food calorie intake is much higher among males as compared to females with an apprehension that male are engaged in remunerative works and the earning hands of the family and if they become weak or ill, then the family income will be reduced, but, this type of practices make the household food insecure on an aggregate level. Such types of irrational thought processing and attitude have to be changed through social awareness programmes and videos based on gender equality.

6. There is also the responsibility of integrated child development scheme (ICDS) department to provide ICDS food to the pregnant, lactating women and children aged 0-5 years of food insecure households under State Nutrition Mission in urban areas because they were more prone to malnourished in near future as it has been provided in rural parts of the Uttar Pradesh state.

7. The wards like Slaughter house, Bhujpura, Shahjamal and Nagla Masani have high risk of diseases in the city due to their choked drains and open drainage system; consequently, these wards are highly food insecure. Therefore, there is an urgent need for proper sanitation facilities provided by the municipality, particularly closed drainage system and toilets in these vulnerable wards because sanitation is one of the key indicators of food absorption and indirectly ensure the efficient biological absorption and digestion of food.

8. High rate of illiteracy among the child labour households has been separated them from the main streamlined community, consequently, their drop out children are more prone to become, sooner or later, working children. Therefore, such families have to be linked with right to education scheme in order to make them more productive and there is also a provision of vocational training programmes for their children with formal education for sustaining their livelihood as per the requirement of area and
population. Besides, especial attention has to be given on the effective implementation of mid-day meal programme which also attract the poor households’ children.

9. Instead, directly ban on child labour, government should adopted such policies that catch root causes of child labour such as illiteracy, low income and unemployment etc. For example, most of the children in Aligarh city traditionally engaged in lock and other household industry. The ignorant and illiterate parents thought that children are their helping hands and in future their occupation will be the main source of livelihood. So, it is better to learn work from childhood instead going to school. Therefore, it is imperative to open the consultancy centres to change the attitude and thoughts of parents and motivate them to stop their children for child labour.

10. Government should also try to relocate their money in improving the standard of living of child labour households by improving their literacy rate, reducing poverty and provide better employment opportunities rather than the allocation of money in banning the child labour.