EFFECTS OF ENVIRONMENTAL PROBLEMS ON PHYSICAL HEALTH AND

SOCIAL FUNCTIONING AMONG WOMEN: A STUDY IN NALGONDA DISTRICT

Mallikarjun Surigi*

Ph.D. scholar in Department of sociology, Osmania university, Hyderabad

Corresponding author: *Mallikarjun Surigi, Department of Sociology, Osmania University Contact information*

Abstract:

Introduction: *India is a nation with a diversified population, one that is rapidly industrializing and urbanizing, and it is diverse both geographically and culturally. Women are physically more calorie-deficient than males, which causes poor physical health and makes them more susceptible to shortages of resources during emergencies. In the acute period of a natural calamity, poor physical and nutritional health may make it difficult to leave and survive.* ***Methodology:*** *The study adopted a cross sectional descriptive study with the aim of assessing the effects of environmental problems on physical health and social functioning among the women, the study population is women between the age group of 18-45 residing in Nalgonda district of Telangana state. The present study adopted a multi-stage proportionate stratified random sampling of probability sampling method with respect to the problems of selected environmentally health-affected areas of Nalgonda District. As per the G*power calculation total sample size for the current study is 300 and various appropriate tools were used in the study.* ***Results:*** *The results indicated that there was a statistically negative correlation found between environmental problems and physical health, physical functioning and social functioning.* ***Conclusion:*** *Women health was directly influenced by the environment problems from the various sources, there is a need of in overcoming from these issues, periodical health camps and health checkups would be suggested to prevent major health issues among the study participants.*

Introduction: India is a nation with a diversified population, one that is rapidly industrializing and urbanizing, and it is diverse both geographically and culturally. Though there have been positive increases in development indices since 2000 due to technological and economic advancements, gender-based health disparities persist, with large gaps (Balarajan et al., 2011; Bhalotra & Clots-Figueras, 2014). The advantages of industrialization

have not been fairly dispersed throughout the population, and these economic gains have coincided with almost doubling of CO2 emissions per capita (World Bank Group, 2018a, 2018b). As a result of these

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modifications, women—particularly those who are poor—are more likely to suffer from longterm health problems brought on by the widespread effects of heat-trapping greenhouse gas emissions, both now and in the future. Women are physically more calorie-deficient than males, which causes poor physical health and makes them more susceptible to shortages of resources during emergencies (Rahman, 2013). In the acute period of a natural calamity, poor physical and nutritional health may make it difficult to leave and survive. (Chowdhury et al., 1993; Dankelman, 2008; Cannon et al., 2003). Women who are expecting are an especially susceptible group, and research has shown that giving birth soon after a catastrophe increases the risk of issues including preeclampsia, uterine haemorrhage, and low birth weight babies (Tong et al., 2011). People who lack access to clean water are forced to drink from potentially polluted sources, both biologically and toxicologically. Water-borne infections are more common among main water handlers, who are typically women and have historically been responsible for providing water for the family (Birch et al., 2012; Duncan, 2006).

Review of literature:

Agarwal et al in their study of 2015 on women aged between 15-49 years along with history of live birth in last 5 years, concluded that IAP exposure was associated with conditions like preeclampsia, eclampsia etc. The development of symptoms was investigated via crosssectional data analysis as given by 3rd National Family Health Survey (NFHS-3) in the year '05-'06. Probability of presence of such symptoms is two times larger in women with biomass fuel exposures vs. those using cleaner fuel. (Agrawal and Yamamoto, 2015).

A cross-sectional study by **Chakraborty et al in 2014** among 50 women, focused on evaluating health effects from biomass fuels in rural West Bengal. Strong relationship ($p<0.05$) was reported between age of biomass users and mean blood pressure. Symptoms like cough, dizziness etc also showed higher prevalence among biomass users. Wood and biomass users also showed high systolic blood pressure and concentration of CO2 due to burning of straw, dung etc. vs. LPG. (Chakraborty et al., 2014)

Although, studies that included spirometry-diagnosed COPD failed to show a significant association in both groups (OR 1.20, 95% CI 0.99 - 1.40). However, the OR summary estimates for chronic bronchitis was significant (OR 2.11, 95% CI 1.70 to 2.52). (**Sana et al., 2018)**

Methodology:

Research Design: The present study adopted a cross-sectional including descriptive research design to describe the socio- economic background of the health victims and various health and environmental issues. The data was collected only one point in time from the respondents.

Various standardized tools were adopted to achieve the aim and objectives of the study.

Objectives of the Study:
- To study the sociodemographic profile of the respondents

- To assess the conditions of various environmental problems
- To assess the physical health and social functioning of women and its relationship with environment problems.

Hypothesis:

- There is a relationship between environmental problems and health status of the women respondents.

    Area of the Study:

The current study was conducted in various environmentally effected areas of Nalgonda District of Telangana state by following the inclusion and exclusion criteria.

Sampling:

The present study adopted a multi-stage proportionate stratified random sampling of probability sampling method with respect to the problems of selected environmentally healthaffected areas of Nalgonda District. The researcher conducted a power analysis using the default effect size [0.3, Moderate to High power] because no studies with comparable variables to evaluate the effect size could be identified. According to the findings, N = 297 was needed for [Correlation: Bivariate Normal Model] in order to obtain 95% power for detecting a medium effect at a significance level of 0.05. The obtained sample size of N = 297 is therefore sufficient to evaluate the study's main hypothesis therefore, the final sample size for the current study is 300.

Methods and Tools of Data Collection:

The researcher has prepared a sociodemographic data sheet including 14 items and prepared a separate interview schedule on environment problems consisting 21 items and another scale was used to assess the general health [General health questionnaire] including physical health and social functioning domains.

Data processing statistical analysis and & Interpretation:

The collected data was verified for gaps. The normality of data was performed using the Shapiro-Wilk test, and the results show that the data was normally distributed; therefore, further data analysis was done based on the normality of the data, and parametric tests were used to analyze the data. Frequency tables were prepared for calculating percentages for different variables. The statistical tests were performed by using the SPSS software version 28, including arithmetic mean and standard deviations.

Results of the study:

Table No:1 Frequency Distribution of Socio-Demographic Profile of the Respondents			Frequency n=300	Percentage %
Sl. No.	Socio-Demographic Details		Frequency n=300	Percentage %
1.	Age	Mean age of the women Mean ± SD	44.31±8.35	
2.	Level of Education	Literate	196	65.3 %
		Illiterate	104	34.7 %
3.	Employment	Landless Labourers	88	29.3 %
		Caste based occupation	19	6.3 %
		Farming	72	24 %
		Business	19	6.3 %
		Private employee	15	5.0 %
		Public sector employee	4	1.3 %
4.	Domicile	Urban	232	77.3 %
		Rural	30	10 %

		Tribal	38	12.7 %
5.	Marital status	Married	232	77.3 %
		Unmarried	30	10 %
		Widowed	38	12.7 %
6.	Type of family	Nuclear family	201	67 %
		Joint family	99	33 %

Table 1 depicts the results of sociodemographic profile of the study participants, the results indicating that the mean age of the respondents was 44.31 ± 8.35, which means the average age group of the study respondents was 44 years. Most of the respondents are literate 65.3 % (n=196) like they primary and secondary educations, the rest respondents (34.7 %) are illiterate, the employment status of the respondents, which showed around 88 of the respondents (29.3%) were Landless Laborers, 19 of them were doing Caste based occupations (6.3 %), the 72 (34 %) of them were farmers. most of the respondents belong to urban (77.3 %), following this, 10 % (30) of them were from rural and the rest 12.7% (n=38) of the respondents were living in tribal locality. Almost 77.3 % (n=232) of the respondents were married, following which 38 of them were widowed and rest 30 respondents were unmarried at the time of study. the family type of the respondents, among all the respondents, 67 % (201) of them were belong to nuclear family setting and the rest 33 % (n=99) were from joint family.

Table No:3 Correlation between environment problems, physical health and social functioning		Environment Problems	Physical Functioning	Physical Health	Social Functioning
Environment Problems	Pearson Correlation	1	-.138*	-.128*	-.182**
	Sig. (2-tailed)		.017	.027	.001
Physical Functioning	Pearson Correlation	-.138*	1	.068	-.126*
	Sig. (2-tailed)	.017		.238	.030
Physical Health	Pearson Correlation	-.128*	.068	1	-.113
	Sig. (2-tailed)	.027	.238		.050
Social Functioning	Pearson Correlation	-.182**	-.126*	-.113	1
	Sig. (2-tailed)	.001	.030	.050	

Table 3 demonstrated the results of Pearson correlation between physical health and environmental problems. The results indicated a statistically negative correlation found between environmental problems and Physical functioning *[r (300) = -.138*, p=0.017]*, Physical health *[r (300) = -.128*, p=0.027],* and social functioning [r (300) = -.182*, p=0.001] among study participants. It is inferred that If environmental problems decrease,

their physical functioning, physical health and social functioning increases. It is evident that health domains are highly influenced by environment problems.

Conclusion: The current study emphasized to assess the relationship between environmental problems and its influence on health status of women from the study area. Women health was directly influenced by the environment problems from the various sources, there is a need of in overcoming from these issues, periodical health camps and health checkups would be suggested to prevent major health issues among the study participants. Awareness campaigns would be beneficial to the women to understand how these environmental issues are impacting on their health and preventive, curative and promotive health practices can be taught to the women. Creating awareness on having health insurance among the study population is important to reduce the financial burden and It will be reduced the health related debts and enhance the accessibility of health sector.

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