

RESEARCH ARTICLE

Assessment of influencing determinants on maternal health and wellness: A descriptive research study

■ Rashmi Dave, Jiju N.Vyas and Neha Tiwari

SUMMARY

Maternal nutrition and health during pregnancy has been associated with healthy outcomes for both mother and child. This study investigated the factors influencing the nutritional and health practices of pregnant women attending regular diagnosis and treatment at Government Hospitals in Ahmedabad. A Study employed a descriptive, non-experimental research design. Personal Interview technique was used for data collection at Government Hospitals. Sample of 150 Pregnant women was selected from the hospitals. Non Probability Convenience Sampling Method was used. SPSS version 20.0 was used to analyze the collected data. Multiple regression technique was applied to understand holistic effect of all the determinants of maternal nutrition and health.

Key Words : Personal interview technique, Multiple regression technique

How to cite this article : Dave, Rashmi, Vyas, Jiju N. and Tiwari, Neha (2022). Assessment of influencing determinants on maternal health and wellness: A descriptive research study. *Internat. J. Plant Sci.*, 17 (1): 43-46, DOI: 10.15740/HAS/IJPS/17.1/43-46, Copyright@ 2022:Hind Agri-Horticultural Society.

Article chronicle : Received : 28.09.2021; **Revised :** 15.10.2021; **Accepted :** 12.11.2021

Handling maternal health issues and reducing maternal deaths remain serious concerns in the developing nation like India. United Nation has already shown its concern about the difficult nature of Indian maternal mortality rate and it has been included in the Sustainable Development Goals of United Nation to be achieved by 2030. SDGs which set a vision to

transform our world by 2030 include seventeen major global goals which are related to maternal health, particularly goals 'Good health and wellbeing' and 'Gender equality'.

Pregnancy is a distinct phase in the life of a mother providing an opportunity for applied interventions to reduce health inequalities for mothers and their families. The nutrition of mothers during pregnancy plays a vital role in the short- and long-term health of a mother and her growing fetus. However, maternal nutrition is usually subject to contexts within the society in which a woman lives. These include social, cultural, economic, political, environmental and behavioral systems which impact on the nutritional wellbeing of pregnant women. For example, it has been suggested that cultural belief, particular taboos and attitudes of women, their partners and their families

MEMBERS OF THE RESEARCH FORUM

Author to be contacted :

Neha Tiwari, ASPEE College of Nutrition and Community Science
S.D. Agricultural University, Sardarkrushinagar (Gujarat) India
Email : nehatiwari@jau.in

Address of the Co-authors:

Rashmi Dave, Krishi Vigyan Kenda (J.A.U.) Amreli (Gujarat) India
Jiju N. Vyas, Krishi Vigyan Kenda (MPUAT), Banswara, Udaipur
(Rajasthan) India

influence their choices about what to eat and what not to eat during pregnancy.

There are multiple factors responsible for maternal health issues and poor health status of pregnant women in India. Present study is aimed at exploring such factors from studying various existing literatures available in this field and to identify major determinants that affect nutritional and health of pregnant women in India. This study is also aimed at suggesting various guidelines to improve the current situation for the wellbeing of the women.

Objectives :

- To identify major determinants of Maternal Health and Wellbeing
- To understand effect of the various determinants on Maternal Health and Well Being
- To identify strength and nature of the relationship between maternal health and wellbeing and Determinants of it.

MATERIAL AND METHODS

A study employed a descriptive, non-experimental research design. Personal Interview technique was used for data collection at Government Hospitals. Sample of 150 Pregnant women was selected from the hospitals. Non Probability Convenience Sampling Method was used. SPSS version 20.0 was used to analyze the collected data. Multiple regression technique was applied to understand holistic effect of all the determinants of maternal nutrition and health. Data analysis has explored six determinants *viz.*, Social Support, Lifestyle, Food Habits, Stress Level, Awareness of Health and Access to Health Services. It was concluded that Nutrition

education and counselling should be given during each visit should be intensified. Special programmes which elicit husband support should be organized in order to increase men's knowledge of adequate nutrition intake in pregnancy and also enhance supportive care which would positively affect women's nutritional practice.

Data analysis and interpretation:

In the data analysis part of the study carry forward same hypothesis using multiple regression. All six factors are inserted as independent variables combined and Maternal Health and Wellbeing inserted as the dependent variable. Mean score was taken as the representative value for that particular variable.

Person correlation was performed first to make base for the multiple regression. Table provides the co-efficient of relation between all independent variables and dependent variable.

RESULTS AND DISCUSSION

Co-efficient of correlation was positive for all the variables and varied between 0.263 to 0.722. All co-efficient of correlation were statistically significant at 5% level of the significant. It proves that there is very good relationship amongst all the determinants. Correlation summary provides the good base for the multiple regressions.

The model summary of Maternal Health and Wellbeing and all six explored variables is given in Table and it shows the co-efficient of determination (R^2) under model which is 0.897, which meant all six factors combine explained 89.7 per cent of the variations in Maternal Health and Wellbeing. Value of 0.897 is really very positive and establishes very strong relationship

Table 1 : Correlation for multiple regressions

	Maternal health and wellbeing	Social support	Lifestyle	Stress level	Food habits	Health awareness	Access to health services
Maternal health and wellbeing	1.000	.722	.587	.728	.641	.756	.700
Social support	.722	1.000	.386	.349	.576	.507	.646
Lifestyle	.587	.386	1.000	.343	.446	.493	.449
Stress level	.728	.349	.343	1.000	.437	.517	.336
Food habits	.641	.576	.446	.437	1.000	.263	.405
Health awareness	.756	.507	.493	.517	.263	1.000	.655
Access to health services	.700	.646	.449	.336	.405	.655	1.000

N= 520, All correlation are statistically significant at 5% level of significant

between all the independent variables and dependent variables. The ANOVA Table is used to assess the overall significance of the regression model. In Table, the F-value (744.308) and the p-value is 0.000. This meant that model is significant as p-values less than 0.05 at $\alpha = 0.05$ level. It further said that explored six variables significantly contribute in the variation of the Maternal Health and Wellbeing.

Further Table provides the co-efficient of the model. According to the table it can be said that all explored factors is significantly influence on the Maternal Health and Wellbeing. All factors are statistically significant as the p value of all the factors are less than 0.05. Among all the factors Stress Level, Health Awareness and Social Support are mainly contributors which influence mostly in the Maternal Health and Wellbeing. Other factors are also statistically significant but the intensity of the influence is low compare to other factors.

All factors are statistically significant as the p value of all the factors are less than 0.05. Among all the factors Food Habits, Access to Health Services and Social

Support are mainly contributors which influence mostly in the Maternal Health and Wellbeing. Other factors are also statistically significant but the intensity of the influence is low compare to other factors. Model can be written as:

$$\text{Maternal Health and Wellbeing} = -.125 + .202 (\text{Social Support}) + .100 (\text{Lifestyle}) + .291 (\text{Food Habits}) + .123 (\text{Stress Level}) + .203 (\text{Access to Health Services}) + .118 (\text{Health Awareness}).$$

Conclusion :

From the above discussion, it can be said that there is strong influence of Food Habits and Access to Health Services on Maternal Health and Wellbeing followed by other factors like Social Support, Stress Level and Lifestyle. So, Government and competent authorities should focus more on developing promotional programs that involves Maternal Health and Wellbeing ambassadors and influencers. Workshops and seminars that enhances Access to Health Services and Social Support also plays very significant role in developing Maternal Health and Wellbeing.

Table 2 : Model summary for multiple regressions

Model	R	R square	Adjusted R square	Std. error of the estimate	Change statistics				
					R square change	F change	df1	df2	Sig. F change
1	.947a	.897	.896	.24958	.897	744.308	6	513	.000

a. Predictors: (Constant), Access to Health Services, Stress Level, Lifestyle, Food Habits, Social Support, Health Awareness

b. Dependent Variable: Maternal Health and Wellbeing

Table 3 : ANOVA for multiple regressions

Model	Sum of squares	Df	Mean square	F	Sig.
1 Regression	278.181	6	46.363	744.308	.000b
Residual	31.955	513	.062		
Total	310.136	519			

a. Dependent variable: Maternal Health and Wellbeing

b. Predictors: (Constant), Access to Health Services, Stress Level, Lifestyle, Food Habits, Social Support, Health Awareness

Table 4 : Co-efficients of multiple regression

Model	Unstandardized co-efficients		Standardized co-efficients	t	Sig.	Collinearity statistics	
	B	Std. error	Beta			Tolerance	VIF
(Constant)	-.125	.065		-1.933	.054		
Social support	.202	.019	.228	10.796	.000	.449	2.227
Lifestyle	.100	.017	.102	5.773	.000	.643	1.556
1 Stress level	.291	.015	.346	19.248	.000	.622	1.609
Food habits	.123	.013	.185	9.373	.000	.516	1.938
Health awareness	.203	.017	.271	12.194	.000	.406	2.464
Access to health services	.118	.019	.138	6.367	.000	.426	2.346

a. Dependent variable: Maternal Health and Wellbeing

REFERENCES

- Abbaspour, N., Hurrell, R. and Kelishadi, R. (2014). Review on iron and its importance for human health. *J. Research in Medical Sciences*, **19**: 164–174. PMID: 24778671.
- Allen, L.H. (2000). Anemia and iron deficiency: effects on pregnancy outcome. *American J. Clinical Nutrition*, **71**: 1280S. <https://doi.org/10.1093/ajcn/71.5.1280S> PMID: 10799402.
- Blackwood E. (2000). *Webs of power: Women, kin, and community in a Sumatran village*. Rowman & Littlefield.
- Braun, V. and Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, **3**: 77–101. <https://doi.org/10.1191/1478088706qp0630a>.
- Braveman, P. and Gottlieb, L. (2014). The social determinants of health: it's time to consider the causes of the causes. *Public Health Reports*, **129** : 19–31.
- Cetin, I. and Laoreti, A. (2015). The importance of maternal nutrition for health. *J. Pediatric & Neonatal Individualized Medicine*, **4** : e040220.
- Chakrabarti, S. and Chakrabarti, A. (2019). Food taboos in pregnancy and early lactation among women living in a rural area of West Bengal. *J. Family Medicine & Primary Care*, **8** : 86–90. https://doi.org/10.4103/jfmpe.jfmpe_53_17 PMID: 30911485.
- Colwell, J. and Som, H. (2004). *The world census of agriculture 2010 programme: A Modular Approach*. In the Third International Conference on Agricultural Statistics (ICAS III), FAO, Cancu'n, Mexico 2004.
- Diana, R., Rachmayanti, R.D., Anwar, F., Khomsan, A., Christiani, D.F. and Kusuma, R. (2018). Food taboos and suggestions among Madurese pregnant women: a qualitative study. *J. Ethnic Foods*, **5** : 246–253. <https://doi.org/10.1016/j.jef.2018.10.006>.
- Frith, H. and Gleeson, K. (2004). Clothing and embodiment: Men managing body image and appearance. *Psychology of Men & Masculinity*, **5**: 40–48. <https://doi.org/10.1037/1524-9220.5.1.40>.
- Hartini, T.N., Padmawati, R.S., Lindholm, L., Surjono, A. and Winkvist, A. (2004). The importance of eating rice: changing food habits among pregnant Indonesian women during the economic crisis. *Social Science Medicine*, **61** : 199–210. <https://doi.org/10.1016/j.socscimed.2004.11.043> PMID: 15847972.
- Higginbottom, G., Vallianatos, H., Forgeron, J., Gibbons, D., Mamede, F. and Barolia, R. (2014). Food choices and practices during pregnancy of immigrant women with high-risk pregnancies in Canada: a pilot study. *BMC Pregnancy and Childbirth*, **14**. <https://doi.org/10.1186/s12884-014-0370-6> PMID: 25467067.

17th
Year
★★★★★ of Excellence ★★★★★