



**ASSOCIATION BETWEEN BMI, PARENTAL KNOWLEDGE AND LIFESTYLE PRACTICES WITH
SELECTED CLINICAL VARIABLES AMONG OVERWEIGHT AND OBESE CHILDREN IN SELECTED
SCHOOLS AT LUCKNOW, UTTAR PRADESH**

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ABSTRACT

Obesity is a complex condition that inter weaves biological, developmental, environmental and genetic factors, it is a significant public health problem. The children in the age group exposed to high fat, high sugar, high salt, energy dense and micronutrient quality the consumption of these dietary pattern in conjunction with lower level of physical activity results in sharp increase in childhood obesity. This study is undertaken to assess the association between pre-test level of BMI, parental knowledge and lifestyle practices and selected clinical variables among overweight and obese children in selected schools at Lucknow, Uttar Pradesh. The objective for the study was to find out the association between pre-test level of BMI, parental knowledge and lifestyle practices and selected clinical variables among overweight and obese children in experimental group and control group. The study was conducted in in selected schools at Lucknow, Uttar Pradesh. A quasi experimental with control design was adopted for the study. Totally 500 school children were participated in the study on the basis of inclusion criteria. Each group consisted of 248 and 252 school children and selected by purposive sampling technique. The feasibility of the study was found out through pilot study. The data was analyzed by using descriptive and inferential statistics. The study findings revealed that, there was a significant association between pre-test level of BMI, parental Knowledge, lifestyles practices with selected clinical variables among overweight and obese children in experimental group and control group.

Keywords: *Overweight, Obesity, BMI, Parental Knowledge, lifestyle.*

INTRODUCTION

Globally the number of obese individuals has tripled since 1975. In 2016, 650 million people were obese. Here 13% of adult aged 18 years and above were obese. In 2019, 38 million children under the age of 5 were found to be overweight or obese.

According to WHO, more than 25 denote overweight and more than 30 denote obesity. The conditions of overweight and obesity primarily occurs due to energy imbalance between calorie consumed, calorie exhausted and excessive intake with lack of physical activity. In the past few years' childhood obesity has tripled more than past 30 years. At present there is an increase tendency with an epidemic character of obesity and overweight frequency, which came to affect, on a world scale, approximately 20-25% of children and 40-45% of the teenagers. Previously considered to physical activity in the prevention of childhood obesity the position of European childhood obesity group and European academy of pediatrics, reveals role of physical activity in the prevention of excessive body weight and gives appropriate recommendation for physical activity and recommendations for school-based intervention, parents and guardians.

STATEMENT OF THE PROBLEM

A study to assess the association between pre-test level of BMI, parental knowledge and lifestyle practices with selected clinical variables in selected schools at Lucknow, Uttar Pradesh

OBJECTIVE OF THE STUDY

To find out the association between pre-test level of BMI, parental knowledge and lifestyle practices and selected clinical variables among overweight and obese children in experimental group and control group.

REVIEW OF LITERATURE

The reviews were collected from various sources like books, journal, and periodicals and also electronic sources such as PubMed / Medline, CINAHL, Science direct, Research gate

Campbell T.E, Franks A, Joseph V.P, (2019) conducted a systematic study to review of genetics and determinants of food choice on adolescence obesity in the past decade. Researcher using CINAHL, EMBASE, Psyc INFO, Psyc Articles, pub Med, SCOPUS, Academic search complete, Web of science, BIOSIS, Cochrane Library. Total 535 studies were selected. 283 studies focused on determinants of food choices and 165 studies focused on genetic



factors. Stress factors related to food choices demonstrated a new trend being explored. The need for precision health, the application of genetic information, could uncover ways food choices affect adolescent obesity. Subashini.et.al (2015) had done a cross-sectional survey by observation method to determine the prevalence of overweight and obesity among private and government school children. Children from both sex in the age of 16 years (500 from government and 500 private schools) were recruited for the study. Children attending government schools were considered to represent low SES while private schools were considered for the high SES. Samples were interviewed for their food habits, physical activity and stress. Both the groups were from rural set up. Skipping meals were common in government school children. But the percentage of fast-food eating was almost equal on both schools. Eating fruits, taking non-vegetarian diet and snacking were high among private school children. Stress was high among government school children compared to private school children. Data showed 12.5% of overweight and 5.4% of obesity among upper SES children, 7% were overweight and 4% were obese in low SES children and inferred that overweight/ obesity was common in high SES children.

To find out the association between pre-test level of BMI, parental knowledge and lifestyle practices and selected clinical variables among overweight and obese children in experimental group.

Table – 1: Association between Pre-test BMI Level and Selected Clinical Variables among Overweight and Obesity Children in Experimental Group. N = 248

S. No	Clinical variables	χ^2	P Value
1.	Nature of Conception	0.9448	0.331*
2.	Child's Gestational Age at Birth	0.8728	0.6463*
3.	Child's Birth Weight	7.59	0.2245*
4.	Child's Feeding History for the First Six Months	0.5701	0.7519
5.	History of Gestational Diabetes Mellitus	0.0108	0.9173
6.	Child's Dietary Pattern	0.0558	0.8131

* $P < 0.05$ level of significance

The above Table – 1 stated that, there was a significant association between pre-test score of BMI level and selected clinical variables among overweight and obesity children in experimental group such as nature of conception ($\chi^2=1.9366$), child's gestational age at birth ($\chi^2=0.8728$) and child's birth weight ($\chi^2=7.59$) except child's feeding history for the first 6 months ($\chi^2=0.5701$), history of gestational diabetes mellitus ($\chi^2=0.0108$) and child's dietary pattern ($\chi^2=0.0558$) at $p < 0.05$ level of significant in experimental group.

Table – 2: Association between Pre-test Knowledge Level and Selected Clinical Variables among Overweight and Obesity Children in Experimental Group. N = 248

S. No	Clinical variables	χ^2	P Value
1.	Nature of Conception	0.1322	0.7127
2.	Child's Gestational Age at Birth	0.1602	0.9230
3.	Child's Birth Weight	1.198	0.5493*
4.	Child's Feeding History for the First Six Months	1.1143	0.5728*
5.	History of Gestational Diabetes Mellitus	0.7883	0.3746*
6.	Child's Dietary Pattern	1.2474	0.2640*

* $P < 0.05$ level of significance

The above Table – 2 presented that, there was a significant association between pre-test score of knowledge level and selected clinical variables among overweight and obesity children in experimental group such as child's birth weight ($\chi^2=1.198$), child's feeding history for the first 6 months ($\chi^2=1.1143$), history of gestational diabetes mellitus ($\chi^2=0.7883$) and child's dietary pattern ($\chi^2=1.2474$) except nature of conception ($\chi^2=0.1322$) and child's gestational age at birth ($\chi^2=0.1602$) at $p < 0.05$ level of significant in experimental group.



Table – 3: Association between Pre-test Level of Lifestyle Practices and Selected Clinical Variables among Overweight and Obesity Children in Experimental Group. N = 248

S. No	Clinical variables	χ^2	P Value
1.	Nature of Conception	0.2122	0.6450
2.	Child's Gestational Age at Birth	2.8229	0.4378*
3.	Child's Birth Weight	28.1787	0.00007*
4.	Child's Feeding History for the First Six Months	0.1608	0.9227
5.	History of Gestational Diabetes Mellitus	0.9635	0.3263*
6.	Child's Dietary Pattern	0.2349	0.6278

The above Table – 3 inferred that, there was a significant association between pre-test level of lifestyle practices and selected clinical variables among overweight and obesity children such as child's gestational age at birth ($\chi^2=2.8229$), child's birth weight ($\chi^2=28.1787$) and history of gestational diabetes mellitus ($\chi^2=0.9635$) except nature of conception ($\chi^2=0.2122$), child's feeding history for the first 6 months ($\chi^2=0.1608$), and child's dietary pattern ($\chi^2=0.2349$) at $p<0.05$ level of significant in experimental group.

Table – 4: Association between Pre-test BMI Level and Selected Clinical Variables among Overweight and Obesity Children in Control Group. N = 252

S. No	Clinical variables	χ^2	P Value
1.	Nature of Conception	0.01	0.9202
2.	Child's Gestational Age at Birth	0.2101	0.9002
3.	Child's Birth Weight	0.1372	0.9336
4.	Child's Feeding History for the First Six Months	0.0283	0.9859
5.	History of Gestational Diabetes Mellitus	0.0287	0.8654
6.	Child's Dietary Pattern	0.076	0.78271

* $P<0.05$ level of significance

The above Table – 4 stated that, there was no significant association between pre-test BMI level and selected clinical variables among overweight and obesity children such as nature of conception ($\chi^2=0.01$), child's gestational age at birth ($\chi^2=0.2101$), child's birth weight ($\chi^2=0.1372$), child's feeding history for the first 6 months ($\chi^2=0.0283$), history of gestational diabetes mellitus ($\chi^2=0.0287$) and child's dietary pattern ($\chi^2=0.076$) at $p<0.05$ level of significant in control group.

Table – 5: Association between Pre-test Parental Knowledge Level and Selected Clinical Variables among Parents of Overweight and Obesity Children in Control Group. N = 252

S. No	Clinical variables	χ^2	P Value
1.	Nature of Conception	0.0383	0.8449
2.	Child's Gestational Age at Birth	0.6272	0.7308
3.	Child's Birth Weight	0.678	0.7136
4.	Child's Feeding History for the First Six Months	0.5957	0.7424
5.	History of Gestational Diabetes Mellitus	0.4846	0.4863
6.	Child's Dietary Pattern	0.5201	0.4707*

* $P<0.05$ level of significance

The above Table - 5 stated that, there was no significant association between pre-test parental knowledge level and selected clinical variables such as nature of conception ($\chi^2=0.0383$), child's gestational age at birth ($\chi^2=0.6272$), child's birth weight ($\chi^2=0.678$), child's feeding history for the first 6 months ($\chi^2=0.5957$) and history of gestational diabetes mellitus ($\chi^2=0.4846$) except child's dietary pattern ($\chi^2=0.5201$) at $p<0.05$ level of significant in control group.



Table – 6: Association between Pre-test Level of Lifestyle Practices and Selected Demographic Variables among Overweight and Obesity Children in Control Group
N = 252

S. No	Clinical variables	χ^2	P Value
1.	Nature of Conception	1.0909	0.2963*
2.	Child's Gestational Age at Birth	0.0305	0.9849
3.	Child's Birth Weight	1.379	0.5017*
4.	Child's Feeding History for the First Six Months	1.3792	0.5018*
5.	History of Gestational Diabetes Mellitus	0.3384	0.5607
6.	Child's Dietary Pattern	0.0982	0.7539

***P<0.05 level of significance**

The above Table – 6 described that, there was a significant association between pre-test level of lifestyle practices and selected clinical variables among overweight and obesity children such as except nature of conception ($\chi^2=1.0909$), child's birth weight ($\chi^2=1.0305$) and child's feeding history for the first 6 months ($\chi^2=0.5018$) except child's gestational age at birth ($\chi^2=0.0305$), history of gestational diabetes mellitus ($\chi^2=0.3384$) and child's dietary pattern ($\chi^2=0.0982$) at $p<0.05$ level of significant in control group.

CONCLUSION

The study findings revealed that, there was a significant association between pre-test level of BMI, parental Knowledge, lifestyles practices with selected clinical variables among overweight and obese children in experimental group and control group.

REFERENCES

1. World Health Organization. Obesity and Overweight. Geneva, WHO (2020). Available online at: <https://www.who.int/news-room/fact-sheets/detail/obesity-and-overweight>.
2. Chhatwal J, Verma M, Riar SK. Obesity among pre-adolescent and adolescents of a developing country (India). <https://apjcn.nhri.org.tw/server/APJCN/13/3/231.pdf>. Asia Pac J Clin Nutr. 2004;13:231–235.
3. Campbell T.E, Franks A, Joseph V.P. Adolescent obesity in the past decade: A systematic review of genetics and determinants of food choice, 2019;4: 5;31(6):344-351.
4. Subashini.et.al (2015) had done a cross-sectional survey by observation method to determine the prevalence of overweight and obesity among private and government school children. 2015;127:539–543.

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