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STUDY PREVALENCE AND IMPLICATIONS OF OVERWEIGHT AND OBESITY IN LEARNING BEHAVIOUR

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ABSTRACT

The purpose of this study was to investigate the extent to which overweight and obesity are challenges among primary school children in Belagavi districts. The study sought to investigate those aspects in terms of prevalence, causes and impacts on social, health as well as children learning behaviors and outcomes. Systematic random sampling was used to select schools while stratified sampling and simple random sampling were used in selecting children. Questionnaires, semi structured interview schedule and focus group discussion guides were also used. Findings revealed an average of 13.5% children, were overweight and obese. Economy status, were significant causes of overweight and obesity. Hypertension, excessive sweating were common to obese children. In addition, overweight and obese children were reported to underperform in academic and physical activities. The study revealed that overweight and obesity were not friendly healthy conditions to children, thus a need to work it out.

Key Words: Overweight and Obesity, Urban, Rural

INTRODUCTION

Overweight and obesity are considered health conditions for adults; currently they are highly prevalent among children and adolescents (Wang, 2004). The increase in fatness among children that was observed by the author during his first study on overweight and obesity was the primary motivation for undertaking another study in this field. In the first study, an immense adiposity among urban children was noticed (Kafyulilo, 2006). Gavin (2005) report that the prevalence of overweight and obesity is increasing among school children worldwide. They further argue that, high percentage of the world's population is

overweight and obese, with USA having 50%, Australia 37%, Western Europe 30% and India 17%. Such an increase in overweight and obesity levels is associated with an increased risk of developing cancer, cardiovascular diseases, non-insulin-dependent diabetes, severe particular dysfunctions, and hypertension worldwide (WHO, 2005). Developing countries also experience the problem of overweight and obesity. Puoane, Steyn, Lambert and Mbananga (2002) reported that approximately 40% of South African population was overweight and obese. On the other hand, Sobngwi, Mbanya, Unwin and Albert (2002) observed that 22% of the urban population and 1.8% of rural population in Cameroon were overweight and obese. At present children are changing the nature of their leisure activities, from actively participating in sports to electronically played games that they play while seated (Gavin, 2005). Ekblom (2005) and Gavin (2005) asserts that at present, more than ever, life is sedentary, whereby children spend more time playing with electronic devices, in computers and handheld video games, than actively participating in physical activities. According to Mabagala (2002), sports and physical activities have a potential role in the development of good body health and fitness. It is also potential in developing good mind and thus improving academic performance among school children (Mabagala, 2002). Mood et al. (1995) argued that in order to provide and maintain optimum health, it was necessary for people of all ages to participate in physical exercises such as walking, jogging, swimming and cycling.

STATEMENT OF THE PROBLEM

“STUDY PREVALENCE AND IMPLICATIONS OF OVERWEIGHT AND OBESITY IN LEARNING BEHAVIOUR”

LITERATURE REVIEW

- Prevalence of overweight and obesity is increasing at an alarming rate all over the world (WHO, 2006). It is estimated that by 2010 the number of overweight and obese children across European Union will be set to top 26 million 6.4 million of them being obese (International Obesity Taskforce, 1996). Number of Overweight and obese in Europe is rising by 1.3 million a year (VanBaak and Seidell, 2007).
- (Doak, 2001). A study of overweight and obesity in South Africa revealed prevalence of 29.2% among young and adult men, and 56.6% among young and adult women (Puoane et al., 2002). In Cameroon obesity was negligible among rural population (0.5%) for men and (3.0%) for women but considerable in urban areas accounting to 22% (Sobngwi et al., 2002).

PURPOSE OF THE STUDY

The purpose of this study was to investigate the extent to which overweight and obesity pose challenges among primary school children in Belagavi district (urban and rural areas respectively) in Karnataka. That was deemed possible by observing prevalence, causes and impacts on children's social, health and learning behaviors including outcomes.

OBJECTIVES OF THE STUDY

- To determine the difference in prevalence of overweight and obesity among primary school children between urban and rural areas.
- Determine impacts of overweight and obesity on children's learning behaviors and outcomes

RESEARCH HYPOTHESIS

- There is no significant difference in prevalence of overweight and obesity between urban and rural primary school children.
- Overweight and obesity have no significant implications for children's learning behaviors and outcomes.

LIMITATIONS OF THE STUDY

This study was delimited to investigation of prevalence, causes as well as health, social, and academic implications of overweight and obesity among primary school children, aged 7 to 14 years, from Belagavi districts. This study may lack relevance to represent some country-patterns, because there are many social classes and geographical locations that were not represented.

DEFINITION OF KEY TERMS AND CONCEPTS

- **Overweight** is a possession of extra weight that is un-proportional to the height and age. It is the body weight falling above the range associated with minimum mortality (Sharkey, 1997).
- **Obesity** refers to much higher body fat percentages than that considered normal for age and sex. It can also be termed as the condition of having excess of non-essential body fat, Body Mass Index (BMI) above 30 (Sharkey, 1997).
- **Urban** refers to settlements with advanced infrastructures, industrialization and reliable on modernized resources.
- **Rural** refers to settlements with dependence on natural resources, such as agriculture and forests and with a weak industrial, health and transport infrastructures.

RESEARCH DESIGN

A research design is a plan that specifies and states clearly the population studied, method and procedure used for processing information obtained from the field (Kothari, 2004). This study used a causal-comparative design to investigate the possible cause-and-effect relationship of overweight and obesity by observing existing consequences and searching back through data for plausible causal factors. The study used mainly a quantitative research approach, but there were some elements of qualitative approaches that were mainly intending at authenticating quantitative data.

SAMPLING

The sample for this study was categorized into three. First, were primary schools, which consisted four schools in each district (Belagavi). The category involved primary school children.

SAMPLING TECHNIQUES

Kumar (1999) defines sampling as a process of selecting a number of individuals for a study in such a way that individuals represent the small group from which they were selected. This study used systematic random sampling, stratified sampling and simple random sampling techniques.

THE STUDY AIMED AT TESTING THE FOLLOWING HYPOTHESES

- There is no significant difference in prevalence of overweight and obesity between rural and urban primary school children
- Overweight and obesity have no significant implications for children's learning behaviors and outcomes.

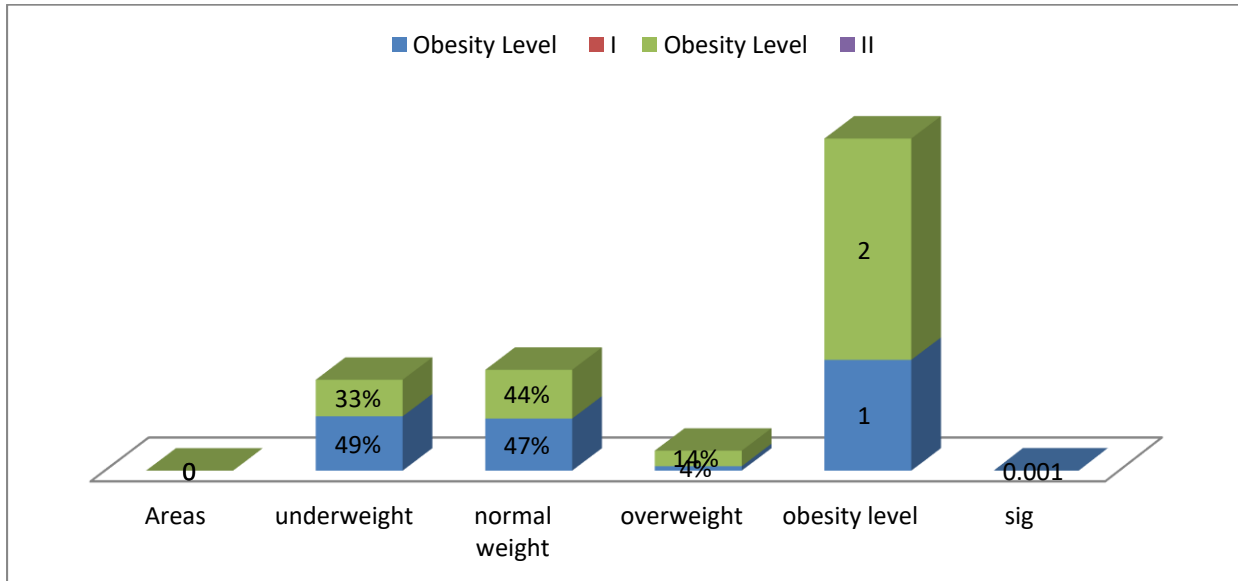
HYPOTHESIS: 1

Findings from BMI measurement indicated a significant ($\chi^2 = 17.77$, $df = 4$ and $sig. = 0.001$) difference in prevalence of overweight as well as obesity between rural and urban primary school children. BMI results for rural primary school children were as follows: 49% underweight, 47% normal weight, and 4% overweight. No cases of obesity were found among rural school children. In urban areas there were; 33% underweight, 44% normal weight, 14% overweight, 8% obesity level 1 and 1% obesity level 2. Results are presented in Figure 4.1 and Appendix D.

TABALE: 1 Prevalence of Overweight and Obesity between Rural and Urban Primary School Children

Levels	Areas	underweight	normal weight	overweight	obesity level	sig
Obesity Level I	Rural school children	49%	47%	4%	1	0.001
Obesity Level II	Urban school children	33%	44%	14%	2	

Graph: 1 Prevalence of Overweight and Obesity between Rural and Urban Primary School Children

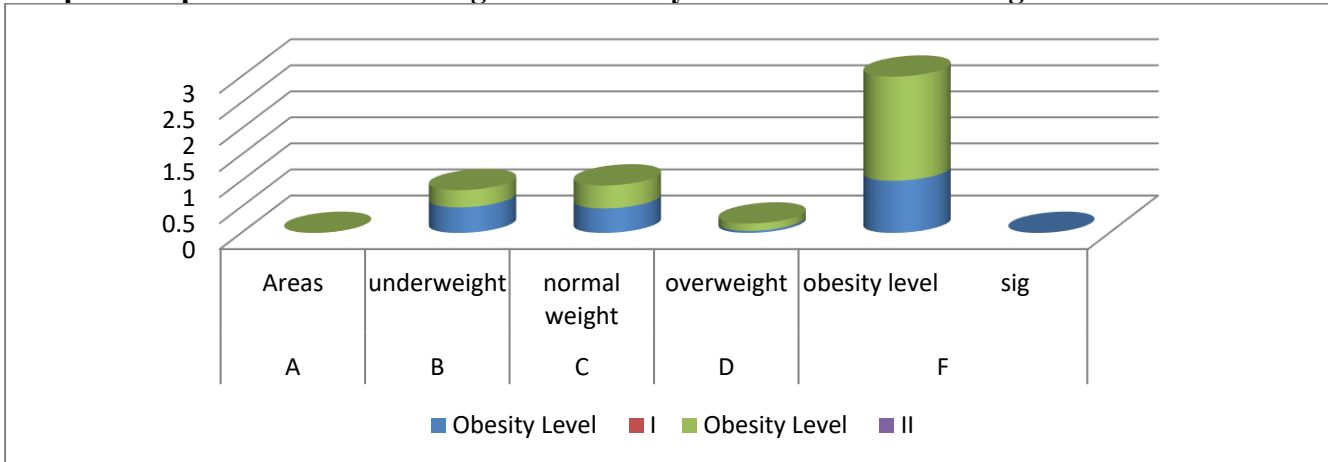


HYPOTHESIS: 2

Results showed a significant ($\chi^2 = 64.26$, d.f = 16 and sig. = 0.000) implications of overweight and obesity for children’s learning behaviors and outcomes. Majority were having poor or average academic performances. Interviews with children and children showed that overweight and obese children were more academic underperformers than normal weight and underweight children. UT1 said that overweight children were slow in responding to questions in classrooms and were lazy in doing home works. UT3 said since he started teaching, he has never ever seen an obese child performing better in academic.

Table: 2 Implications of Overweight and Obesity for Children’s Learning Behaviors and Outcomes

GRADE	A	B	C	D	F	
Levels	Areas	underweight	normal weight	overweight	obesity level	sig
Obesity Level I	Rural school children	49%	47%	4%	1	0.001
Obesity Level II	Urban school children	33%	44%	14%	2	

Graph: 2 Implications of Overweight and Obesity for Children's Learning Behaviors and Outcomes

Findings

- Final results on prevalence of overweight and obesity among primary school children revealed that overweight and obesity were far more prevalent in urban settings by 19% than in rural settings. Chi-square tests revealed a significant difference in overweight and obesity between urban and rural settings. Therefore the researcher rejected the null hypothesis, which stated “There is no significance difference in prevalence of overweight and obesity between rural and urban primary school children” Instead accepted the alternative hypothesis” there is significance difference in overweight and obesity between rural and urban primary school children”.
- Findings revealed that overweight and obese children rarely participated in discussion with peers and were slow in responding to questions. They were also lazy and inactive when in the classroom. They arrived at school late getting to the classroom while others have already started studies.

CONCLUSION

The purpose of this study was to investigate the difference in prevalence of overweight and obesity among primary school children between rural and urban settings. It was also intended to identify the causes of overweight and obesity by assessing lifestyle behaviors that subjects children to overweight and obesity. It was further sought to investigate the health and social implications of overweight and obesity among primary school children as well as investigating the impacts that overweight and obesity had on the children's learning behaviors and outcomes. The findings of this study showed a significant difference in prevalence of overweight and obesity among rural (4%) and urban (23%) children. It also revealed that physical inactivity (sedentary life), family economic status, household occupations, nature of transport and nutrition have significant effects to overweight and obesity among primary school children.

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