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## Relationship between leisure time habits and Body-Mass-Index of college females

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**Introduction:** The purpose of this research proposal is to decipher whether individual habits contributed to increase or decrease in metabolic rate. From the physiological point of view, as the daily physical activity levels increase there is a subsequent increase in metabolic rate and caloric expenditure. People spend enormous amount of time watching television, computer games, sleeping, and other physical activities for enjoyment. These activities will determine how our body will expend energy. It can be inferred that people who are overweight may not participate in physical activities due to social, psychological, and physical reasons. They may spend more time in less physical exertion activities during their leisure time. Some of the leisure time activities may lead to change in the metabolic rate and release of hormones associated with pleasure. It appears that the pleasure and enjoyment one can obtain during other leisure time activities and physical activity are different. The physical activities increase metabolic rate and other activities decrease metabolic rate although both activities render pleasure to different individuals at different levels. Although increased caloric intake and decreased physical activities are the causes of increased BMI, the habits, such as watching television, play computer games, and sleep etc. the habits that we develop may also contribute to lower metabolic rate. The lower metabolic rate leads to lower energy levels and eventual increase in fat storage in the body.

**Hypothesis:** It was hypothesized that the individuals who like to watch television and computer games for pleasure during leisure will have higher Body-Mass-Index.

**Subjects:** A group of 37 college aged, 18-25, females volunteered to be the subjects for the study. All subjects signed an informed consent.

**Method:** Each subject's weight and height were collected to determine BMI. The leisure time activities that were included were sleeping, watching television, use of computers and sports and physical activities. A Likert scale questionnaire was developed and had 4 levels of answers for each of the leisure time activities. A Person-Product moment correlation was used to determine the relationship between BMI and leisure time activities.

**Results:** The results indicate that a negative correlation of -0.739 between BMI and physical activities and sports. There is no correlation between other variables. A correlations matrix is presented below.

**Conclusion:** This research demonstrates that the BMI is significantly lower for individuals who like to participate in physical activities during their leisure time. This habit will develop as we grow into adulthood. Therefore, it is important to develop physical activity as habits during early years that may carry into adulthood.

### Biography

Anand Shetty is Professor in the Department of Physical Therapy at the University of St. Mary. He is also the Co-Director of Research in the Department. Currently, he teaches Anatomy, Exercise Physiology and series of research courses. He has received his Doctoral degree in Physical Education from the University of Northern Colorado. He has published and presented numerous articles on obesity and frequent invited speaker on obesity and nutrition.

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