Analytical Comparison of the Effectiveness of the Diabetes Prevention Program and Weight Watchers as media to prevent Type II Diabetes via Weight Loss in Different Age Categories

**Abdul Karim Khan**¹, Kelly Nicole Brunson Palmer², and David G. Marrero²

¹Department of Biology, Indiana University Purdue University School of Science; ²Diabetes Translational Research Center, Indiana University School of Medicine

Type II Diabetes is a condition in which the body does not utilize insulin properly and causes detrimental symptoms such as glucose build up in the blood, overflowed into the urine and passed out of the body without fulfilling the body’s main source of fuel. The Diabetes Prevention Program (DPP) is a multi-center clinical research study aimed to discover modest weight loss methods compared to oral medication (Glucophage) which prevents diabetes. Subsequently, the Health Information and Translational Sciences department at Indiana University School of Medicine uses Weight Watchers, a weight loss program, for participants at risk for Type II Diabetes (pre-diabetic) to monitor their weight and glucose levels. Both programs are investigating ways to justify the same hypothesis using different methods. Both studies aspire to determine the most affective ways for people to lose weight in order to prevent Type II Diabetes. The DPP was an efficacy trial to establish a correlation between weight loss and the risk of Type II Diabetes. Although the DPP successfully proved their hypothesis, the Weight Watchers study provides another approach in the mission of diabetes prevention. By analyzing six months of archived physical measurements data for the Diabetes Prevention Program study and the Weight Watchers study, one can determine how affective each program is in preventing weight loss depending on the age classification. The age groups are compared in fifteen-year intervals for both programs. Although both programs are successful in their mission, the conclusion of which program is more affective is still under continued study.

Mentors: Kelly Palmer, Diabetes Translational Research Center, Indiana University School of Medicine; Vicki Bonds, Center for Research and Learning, Indiana University Purdue University Indianapolis; Simon Atkinson, Department of Biology, Indiana University Purdue University Indianapolis; David Marrero, Diabetes Translational Research Center, Indiana University School of Medicine