

## In Pursuit of Change: Youth Response to Intensive Goal Setting Embedded in a Serious Video Game

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### Abstract

#### **Background:**

Type 2 diabetes has increased in prevalence among youth, paralleling the increase in pediatric obesity. Helping youth achieve energy balance by changing diet and physical activity behaviors should decrease the risk for type 2 diabetes and obesity. Goal setting and goal review are critical components of behavior change. Theory-informed video games that emphasize development and refinement of goal setting and goal review skills provide a method for achieving energy balance in an informative, entertaining format. This article reports alpha-testing results of early versions of theory-informed goal setting and reviews components of two diabetes and obesity prevention video games for preadolescents.

#### **Method:**

Two episodes each of two video games were alpha tested with 9- to 11-year-old youth from multiple ethnic groups. Alpha testing included observed game play followed by a scripted interview. The staff was trained in observation and interview techniques prior to data collection.

#### **Results:**

Although some difficulties were encountered, alpha testers generally understood goal setting and review components and comprehended they were setting personal goals. Although goal setting and review involved multiple steps, youth were generally able to complete them quickly, with minimal difficulty. Few technical issues arose; however, several usability and comprehension problems were identified.

#### **Conclusion:**

Theory-informed video games may be an effective medium for promoting youth diabetes and obesity prevention. Alpha testing helps identify problems likely to have a negative effect on functionality, usability, and comprehension during development, thereby providing an opportunity to correct these issues prior to final production.

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**Abbreviations:** (ARS) Agricultural Research Service, (BIT) behavioral inoculation theory, (ELM) elaboration likelihood model, (SCT) social cognitive theory, (SDT) self determination theory, (USDA) U.S. Department of Agriculture

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