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## The HAPPY (Having a Positive Perception of You) App

-The US is experiencing an epidemic of diabetes, heart disease and mental health problems associated with overweight, especially among children and adolescents. Body Mass Index (BMI) is a widely used tool to assess for risk of overweight or obesity and to serve as a basis for referral and treatment. However, BMI cannot distinguish muscle from fat, thus it is an incomplete measure for appropriate referral and follow up.

Almost half (46%) of high school students report trying to lose weight and misperceived body image can have a negative effect on weight control behaviors. Unhealthy weight control behaviors can result in low self-esteem, depression and development of eating disorders. Tools to monitor progress in targeted goals are rudimentary, not visually stimulating or interactive and don't provide meaningful feedback. Positive lifestyle changes can affect an individuals' body composition which in turn can affect their perceptions of their bodies, their body shapes, their satisfaction of their bodies, and emotional well-being.

Researchers at Arizona State University have developed a novel avatar-based application entitled The HAPPY (Having a Positive Perception of You) App to help better understand an individuals' body perceptions and promote adherence to healthy behaviors. The HAPPY App provides a visual approach to body perception and monitoring the body changes that users make as a result of healthy eating and recommended physical activity. It utilizes avatars to monitor health goals and align body perceptions, including users' perceptions to understand what they think their bodies look like (Perceived Avatar) and what they want their bodies to look like within realistic parameters (Target Avatar). A third avatar (Actual Avatar) is used to identify an accurate representation of the person using seven body tape measurements (neck, chest/bust, waist, bicep, hips, thigh, and calf). These three avatars can be used to understand how the users feel about themselves and also as a tool to effectively identify accurate representations of their bodies and monitor their goals.

Female Avatar Front

	Target	Perceived	Actual
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Preliminary studies among male and female high school students have been conducted on the first version of the HAPPY App and showed positive results. The

users were comfortable with the avatars and using the avatars to project how their bodies were changing. Additional feedback has been gathered and another version is in the works which would provide users with additional capabilities including greater range of potential changes to avatar body parts, superimposing the perceived, actual and target avatars for better visualization and more customization of the avatars. These capabilities could also be designed into the App as rewards for practice of health behaviors.

This innovative health promotion app will help individuals, especially children and adolescents become better informed about their behaviors so that they are motivated to perform healthy behaviors and have more confidence in those behaviors.

Female Avatar Side

	Target	Perceived	Actual
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Potential Applications

- Screen users' perceptions of their bodies:
  - Attain healthy bodies
  - Maintain healthy bodies
  - Promote healthy lifestyle and eating choices

Benefits and Advantages

- Provides meaningful feedback
- Promotes positive body perceptions
- Promotes motivation and adherence to practice healthy behaviors
- Uses more than just BMI to create the avatars

For more information about this opportunity, please see

[Lyles et al - BMC Public Health - 2015](#)

For more information about the inventor(s) and their research, please see

[Dr. Amresh's departmental webpage](#)