

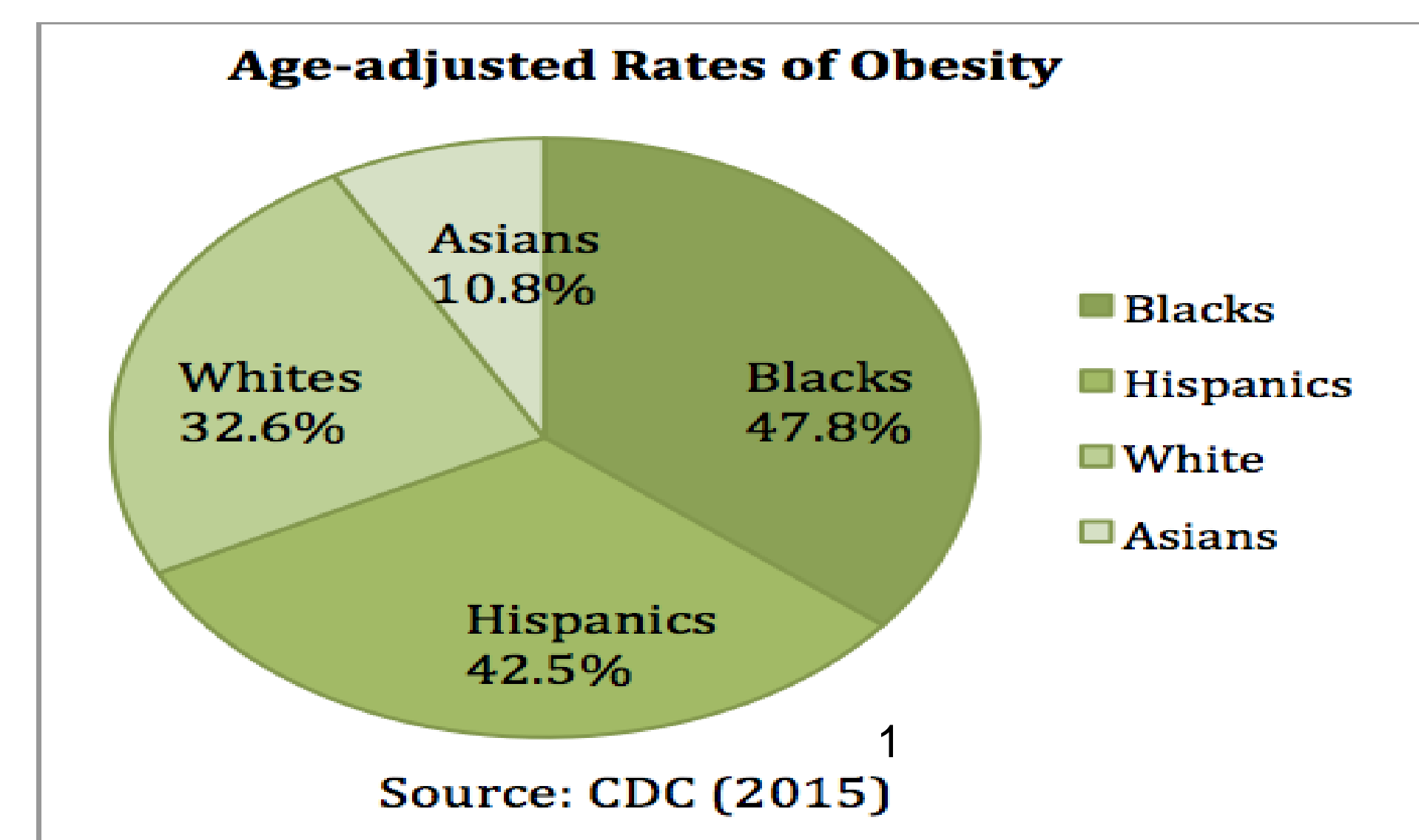
Utilizing Text Messaging To Promote Weight Loss and Behavior Change in Haitian Americans

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Statement of Purpose

The purpose of this evidence based project is to deliver health education via text messaging to promote weight loss, and behavior changes among Haitian Americans that are 18 years, and older in a faith-based institution in Miami.

Background

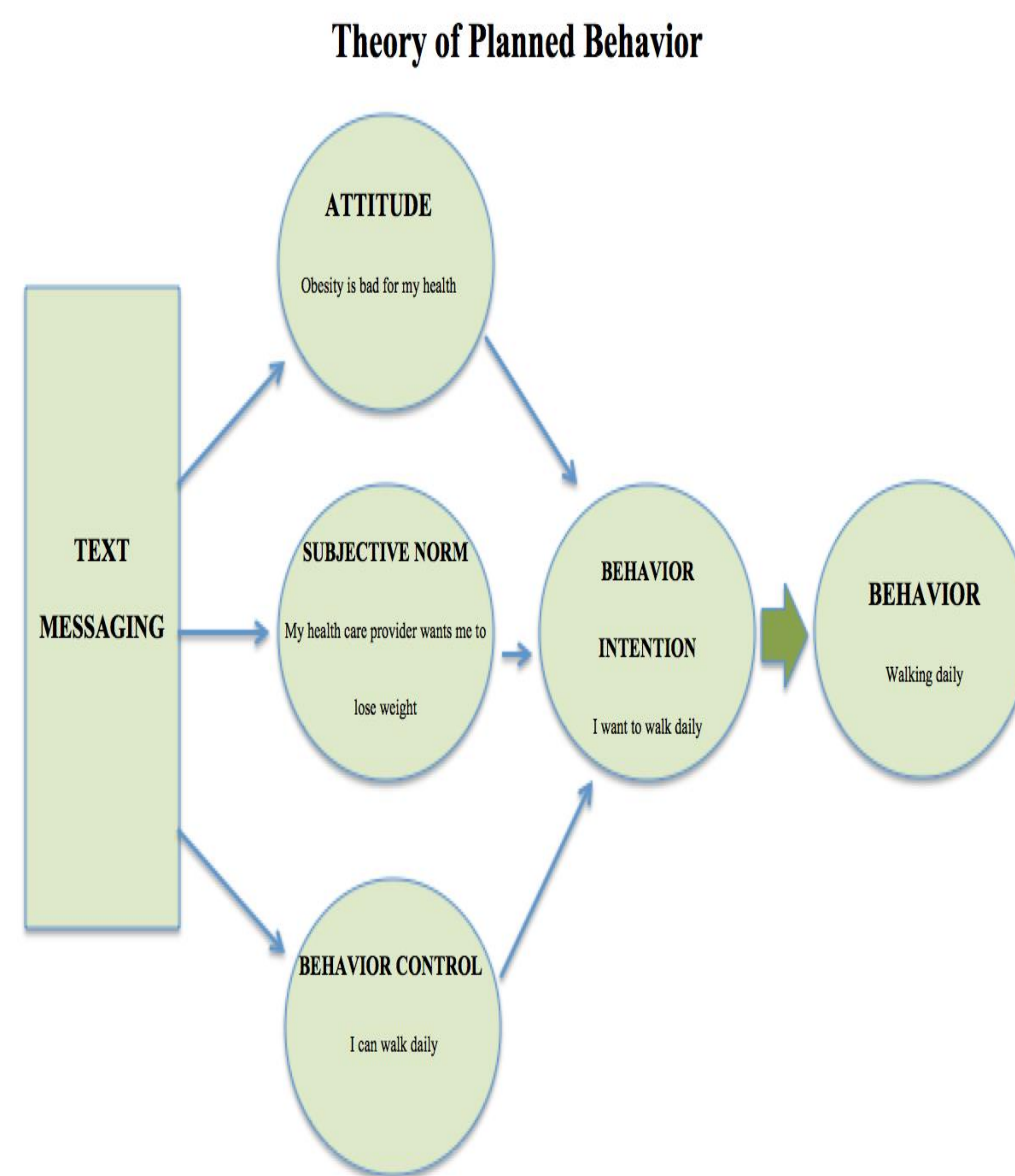


- Obesity is associated with increased risk of type 2 diabetes, coronary heart disease, sleep apnea, hypertension, respiratory issues, osteoarthritis, gallbladder disease, mental health problems, disabilities, and some types of cancer. ^{2,3}
- In 2008, the annual medical cost of obesity increased to nearly 10% and was estimated to be \$147 billion. ⁴
- Haitian women are more prone to obesity related illness such as chronic hypertension. ⁵
- Evidence has emerged on the use of mobile technology to promote healthy behavior change. ^{6,7}
- Text messaging intervention may be promising in reaching and addressing some weight loss barriers in African Americans. ⁸
- The church is a major component of African-American lives; in addition to spiritual well-being, the church plays a vital role in providing social support, and can also be utilized to facilitate positive behavior change. ⁹
- Systematic reviews and meta-analysis have shown that text messaging can be an effective intervention in promoting weight loss. ^{10,11,12}
- Weight loss studies using text messages conducted on African Americans showed some statistically significant outcomes. ^{13,14}

Methods

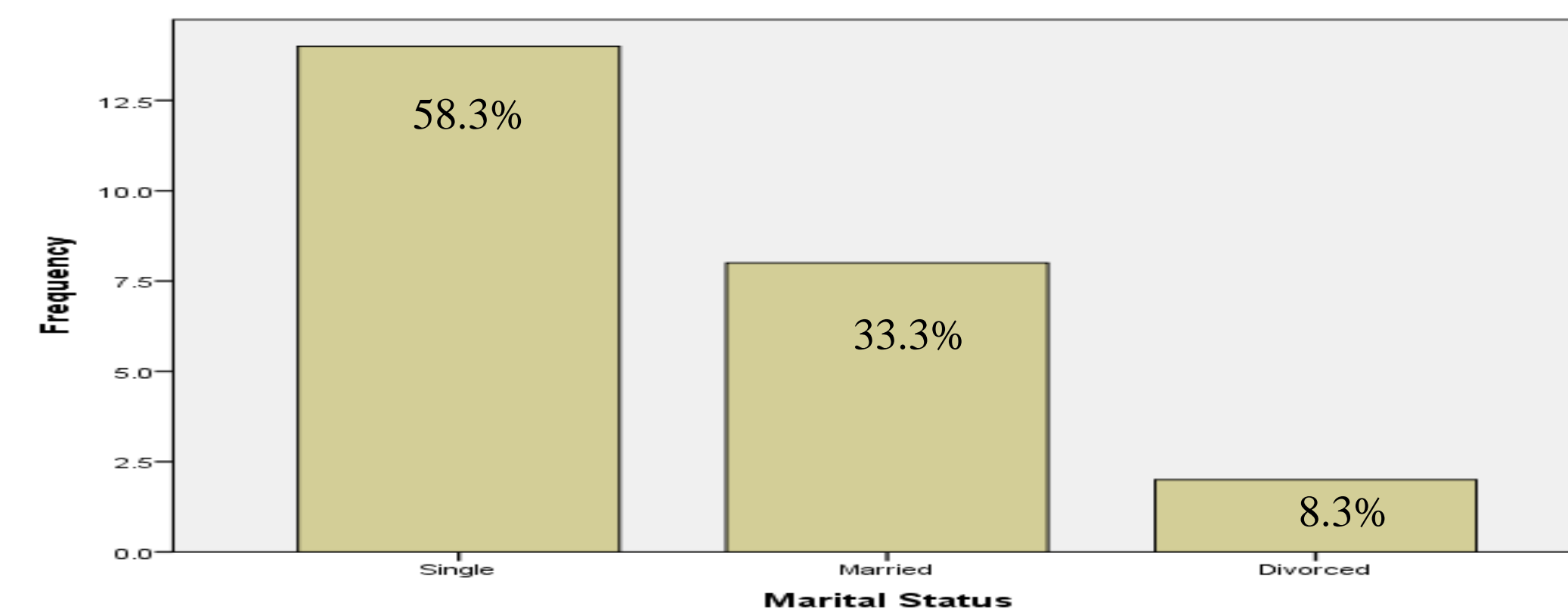
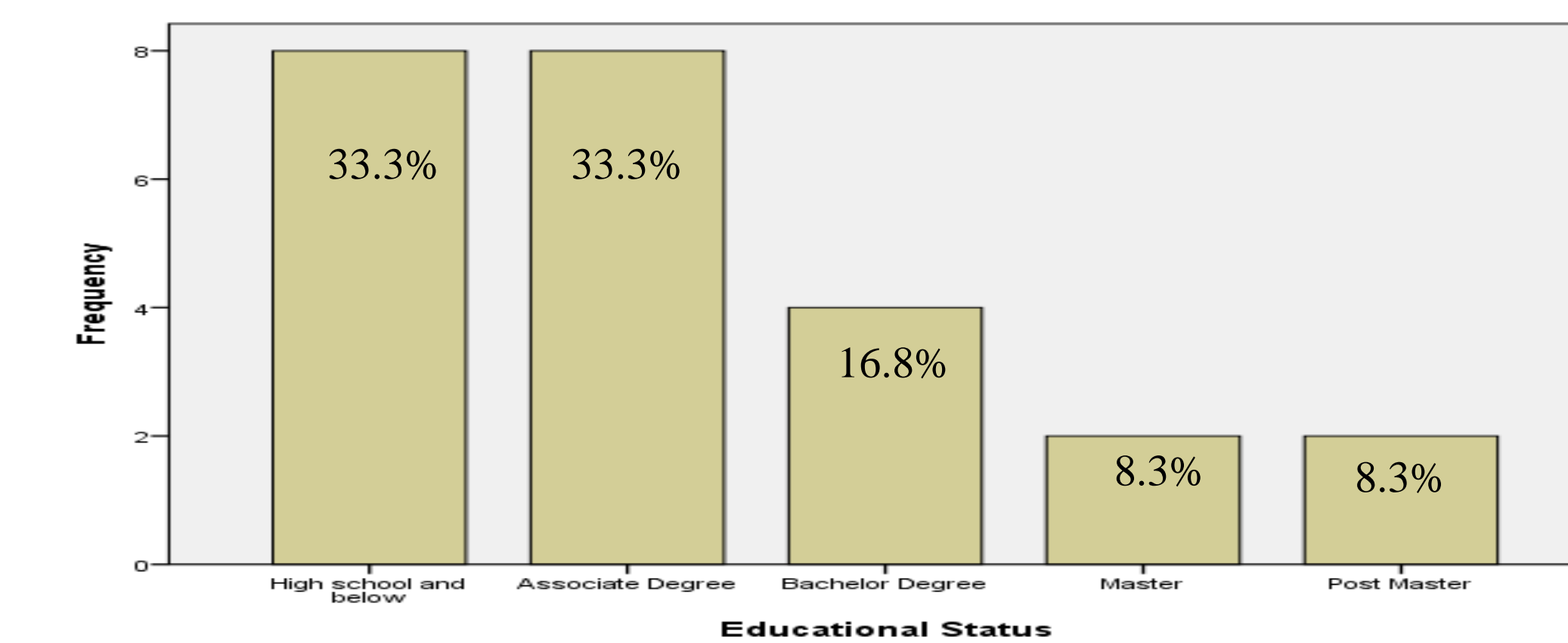
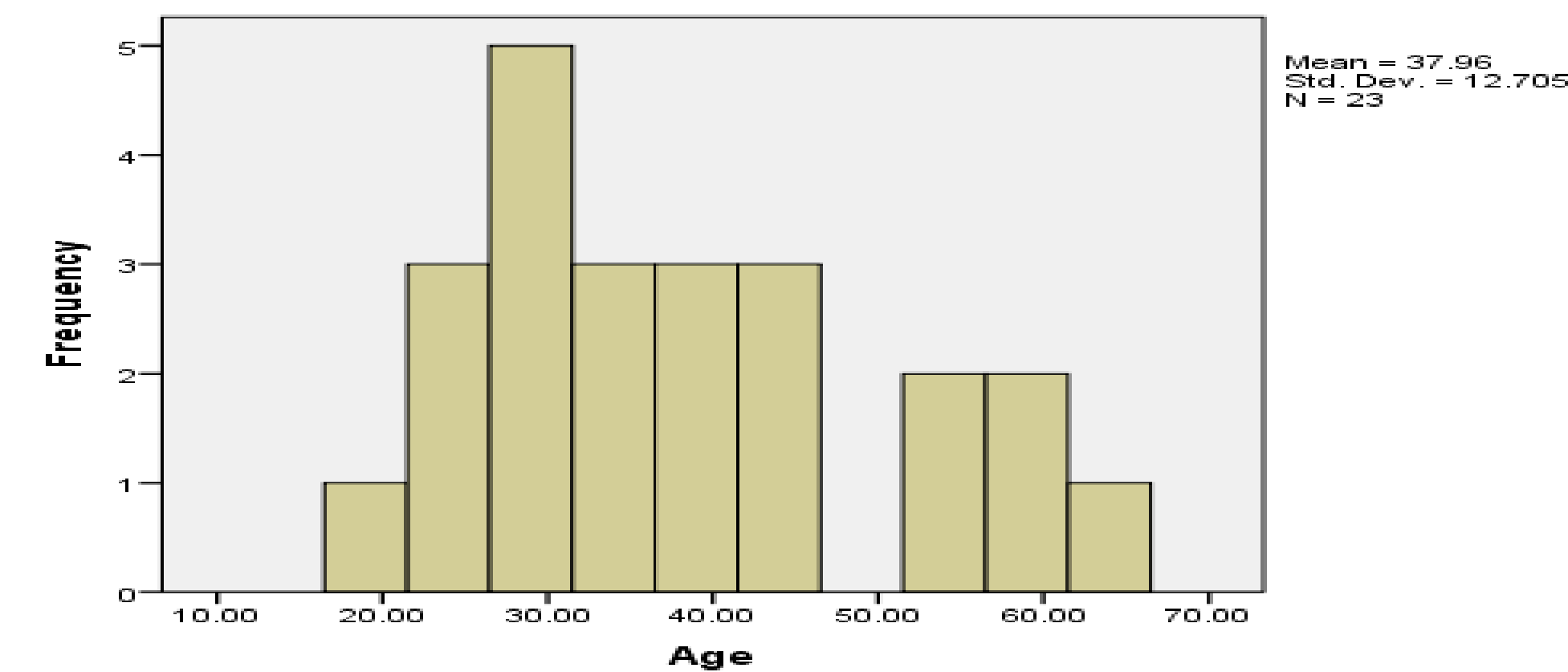
- After obtaining the IRB approval and the informed consents, the quasi-experimental design was used to implement this evidence-based project over a period of 10 weeks at a Haitian American Church located in Miami Dade County Florida.
- Flyers and church announcements were used to recruit participants (N=25). The inclusion criteria were adults 18 years of age and older, BMI 25 and above, cellphone ownership, and the ability to read English.
- Participants weight were measured at baseline, 5 weeks, and 10 weeks. Additionally, the participants completed the Healthy Eating Vital Sign (HEVS) and Godin Shepherd Leisure-Time Physical Activity Questionnaire at baseline, 5 weeks and 10 weeks.
- Daily text messages were sent using a mass text messaging software between 8- 10 A.M.
- Data were analyzed using the SPSS database. ¹⁵

Theoretical Framework



Source: Ajzen, I (1991) & Smith, S (2015) ^{16,17}

Sample



Results

Eating Behavior Vital signs

5 weeks evaluation

Significant reduction in the following eating behaviors:

- Juice or punch consumption yesterday (p=.02)
- Typical juice or punch consumption in one day (p=.01)

10 weeks evaluation

Significant increase in total positive eating behaviors (p=.007)

Significant reduction in the following eating behaviors:

- Fast food or restaurant consumption in the last week (p=.025)
- Typical fast food or restaurant consumption in one week (p=.006)
- Typical soda consumption in one day (p=.029)
- Typical juice or punch consumption in one day (p=.001)
- Total negative eating behaviors (p=.004)

Results

Weight Difference

Weight reduction at 5 weeks (p=.15)

Weight reduction at 10 weeks (p = .07)

Physical Activity

Significant increase in moderate physical activity at 10 weeks (p=.05)

*The results are further described in a statistical table

Discussion

Strengths

- First study that analyzed the impact of text messages to promote weight loss and behavior change among Haitian Americans.
- 96% retention rate at 10 weeks.
- 92% of the participants reported that the text messages were helpful.
- 92% reported that the text messages delivery time was appropriate.
- 87% reported that they applied the text messages recommendations.
- Cost effective and feasible.

Limitations

- Small, convenient sample.
- Absence of a control group.
- Potential selection and self reporting bias.

Applications

- Weight reduction was not statistically significant. We postulate that longer duration will increase the possibility of higher meaningful weight loss.
- Text messages can be an effective method of promoting behavior changes.

Recommendations

- Further studies are necessary to examine the most effective duration and text message dosages.
- Conduct a more rigorous randomized control trial with a large sample size.
- Additional studies that evaluate the impact of visual images and interactive text messages.

References

Available upon request

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