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Video-Based Diabetes Education for a Culturally Diverse Population

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Dedication

This project is dedicated to my loving family. To my husband, David, who deserves this degree more than I. He patiently supported me through this process, dried many tears, and pick up all the responsibilities that I could not. Most of all, he loved me unconditionally, even when I was less than lovable. To my children, Hannah and Tyler. Words cannot express the love and pride I have for both of you. To my mother, who always believed in me and served as a role model for emotional and spiritual strength.

Acknowledgements

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Abstract

Immigrants and refugees represent an underserved population in need of quality, accessible, and culturally appropriate healthcare and education. Diabetes is a chronic condition frequently seen in this population. The author utilized the Wagner Chronic Care Model (CCM) as a theoretical framework for planning diabetes education delivery in this diverse population. Studies report significant health disparities in diabetes care and subsequent poor diabetes quality indicators in refugees and immigrants. Research has found that culturally sensitive diabetes education can improve diabetes outcomes in ethnically diverse populations. The author implemented a translational project to develop and evaluate a video-based diabetes health education intervention translated into English, Arabic, and Hindi to be used in a busy, culturally diverse, primary care waiting room setting. Results showed a statistically significant increase in knowledge of diabetes and high levels of self-efficacy and acceptability following the video intervention. The author suggests video-based health education as a viable educational solution for diabetic adults receiving care at a culturally diverse clinic in Clarkston, Georgia.

Keywords: refugee, immigrant, diabetes, health education, United States, video

Video-Based Diabetes Education for a Culturally Diverse Population

According to the U.N. Refugee Agency, there are 22.5 million refugees world-wide. Of those refugees, 189,300 were relocated in 2016 (UN Refugee Agency, 2017). The United States Department of State estimates that America admitted up to 45,000 refugees in the 2018 fiscal year (U.S. Department of State, 2017). Additionally, immigrants from various countries are also admitted yearly to the United States. Clarkston, Georgia has been a haven for many refugees and immigrants from diverse cultures. Its welcoming attitude has given the town a reputation for the most diverse square mile in the United States (Shaer, 2017). The influx of refugees and immigrants has also brought the small, Georgia town some challenges in how to supply needed resources. Clarkston Community Health Center (CCHC) has provided a solution for quality medical care for this diverse population. As a free clinic, it provides preventative services and chronic disease management for patients without medical insurance and those who have a low-income.

Problem Statement

The need for culturally sensitive diabetes health education, in a variety of languages, was identified as one of the biggest challenges to providing quality diabetes care at CCHC. Diabetes is a chronic condition commonly treated at CCHC. Research supports that health disparities exist in refugee and immigrant patients in diabetes care and often these patients have suboptimal outcomes (Wieland, Morrison, Cha, Rahman, & Chaudhry, 2012). Additionally, those that require language interpreter services are at increased risk of poor diabetes outcomes (Njeru et al., 2017).

The specific purpose of this translational and clinical project was to test strategies to provide culturally sensitive, video-based diabetes health education at CCHC to adults over 18 years of age speaking select languages (English, Arabic, and Hindi).

The following clinical research questions were developed to guide the evaluation of this project:

1. What demographic factors (age, gender, primary language, education level, and years lived in the United States) are associated with increased knowledge following the diabetes health education intervention.

2. What demographic factors (age, gender, region of birth, primary language, education level, and years lived in the United States) are associated with acceptability of the diabetes health education intervention.

3. What demographic factors (age, gender, primary language, education level, and years lived in the United States) are associated with self-efficacy following the diabetes health education intervention.

4. Will a culturally sensitive, evidence-based diabetes health education video increase knowledge of diabetes in patients speaking Arabic, Hindi, or English at Clarkston Community Health Center?

5. Will a culturally sensitive, evidence-based diabetes health education video be an acceptable educational solution in patients speaking Arabic, Hindi, or English at Clarkston Community Health Center?

6. Will a culturally sensitive, evidence-based diabetes health education video improve self-efficacy in patients speaking Arabic, Hindi, or English at Clarkston Community Health Center?

Qualitative clinical questions included:

1. What are common themes regarding the dietary implications of living with diabetes?
2. What are common themes regarding individual perceptions of diabetes?
3. What are common themes regarding the diabetes education needs of specific cultures?

Feasibility

The primary investigator (PI) implemented the project at Clarkston Community Health Center in Clarkston, Georgia. The PI volunteers at the clinic as an advanced practice nurse and also mentors Bachelor of Science in Nursing (BSN) and family nurse practitioner (FNP) students from the University of North Georgia at the clinic. When considering priority project needs, the PI met with the founders of the clinic, Dr. Gushan Harjee and Dr. Saeed Raees. The founders and primary stakeholders requested that the DNP student focus on a video-based health education tool to meet the needs of this diverse population. Due to the long wait times at the clinic, video-based education was suggested to maximize education during this potentially wasted time.

A community volunteer assisted in obtaining and installing video monitors and Miracast to display the video in the waiting room. BSN students from University of North Georgia assisted in creating an English version of the educational video and trained translational volunteers assisted in the interpretation of the material (Appendix B). Kaltura, a closed captioning computer program, was utilized to overlay text onto the video. The feasibility of the project was discussed with the primary stakeholders and the translational project committee members. CCHC (Appendix A), committee (Appendix K), and IRB (Appendix I) approval was given to proceed with the project.

Needs Assessment

Two needs assessments were conducted and supported the necessity of this translational project. Clarkston Community Health Center meets the primary healthcare needs of a diverse population. In a 7-month long language needs assessment occurring from April to October 2017, Emory medical students identified 37 different languages spoken by patients (n = 909) at the clinic. The most common languages identified were English (21.9%), Arabic (17.9%), and Hindi (15.7%). In a health education needs assessment conducted by the PI, 81% of respondents (n = 42) stated that they would definitely be interested in learning more about their health and an additional 14.3% said that they may be interested in learning more about their health. When discussing desired topics of health education, 45.5 % (n = 33) reported that they were interested in learning more about diabetes and 54.5% were interested in learning more about healthy lifestyles. The educational backgrounds of the respondents (n = 40) were also assessed with 60% having at least a high school education. Forty percent attended at least some college and 7.5% had a post-graduate degree. It was determined that more data was needed to assess appropriate educational solutions for this diverse population.

Background

Research suggests that health disparities exist in refugee and immigrant patients in diabetes care and indicators, as compared to non-foreign-born patients (Wieland et al., 2012). Limited English proficiency has also been identified as a risk factor for poor glycemic control (Njeru et al., 2017). Barriers to managing chronic conditions, such as diabetes, in refugee and immigrant populations may include: transportation; language barriers; navigating health services, including pharmacies; lack of medical insurance; and culturally specific dietary and

exercise practices (Terasaki, Ahrenholz, & Haider, 2015). Cultural sensitivity in addressing these issues is critical in caring for diverse ethnic groups.

The goal of this translational project was to strive to further investigate diabetes health education for diverse ethnic groups and determine if culturally appropriate education can improve knowledge and self-efficacy related to diabetes and if video-based health education is an acceptable tool for education in this population.

Review and Synthesis of the Evidence

A review of the literature was performed in the Galileo database. Articles were also identified from the reference lists of pertinent articles. Key terms included: refugee, immigrant, diabetes, health education, United States, and video. Articles were limited to the years 2012 to 2018. A total of 592 articles were initially identified and screened for appropriateness. Twenty articles were obtained in full text reviewed. Nine pertinent articles are highlighted below.

Short-Term and Long-Term Diabetes Outcomes

Disparities in diabetes care and outcomes have been identified for refugee and immigrant patients. However, research supports the belief that both short-term and long-term diabetic outcomes show improvement when patients receive culturally sensitive educations (Wieland et al., 2012, & Attridge et al., 2014).

Wieland et al. (2012) compared diabetes care between adult Somali immigrants and refugees and non-Somali patients. In a retrospective, descriptive study, the researchers examined medical records from 5,843 non-Somali and 81 Somali diabetic patients. These patients had previously obtained care at internal and family medicine clinics associated with Mayo Clinic in Rochester, Illinois. All patients were insured and had access to the same resources. The study results found that Somali diabetic patients had poorer glycemic control than their non-Somali

counterparts. Results were statistically significant ($p = 0.02$) with 40.6% of Somali patients meeting recommended hemoglobin A1c criteria as compared with 53.9% of non-Somali patients reaching the same criteria. There was also noted to be an association between the number of clinic visits that the patient attended and the diabetes outcomes. Blood pressure and LDL comparisons were also assessed, but differences were not statistically significant. Researchers suggested further studies to investigate health disparities in this vulnerable population (Wieland, Morrison, Cha, Rahman, & Chaudhry, 2012).

Attridge et al. (2014) conducted a systematic review of the literature regarding culturally sensitive health education for type 2 diabetic patients from diverse ethnic groups. They questioned if culturally sensitive diabetes health education improved outcomes, as compared to the usual diabetes health education. The study included 7,453 participants from 33 randomized control trials. All participants were previously diagnosed with type 2 diabetes, over the age of 16 years, and were residents of developed countries. Attridge and colleagues (2014) concluded that culturally sensitive diabetes health education may improve short or medium-term diabetes outcomes. This was evidenced by improved hemoglobin A1c at 3 (*MD* = -0.4%), 6 (*MD* = -0.5%), and 12 (*MD* = -0.2%) months. Knowledge of diabetes was also noted to increase at 3, 6, and 12 months (*SMD* = 0.4, 0.5, and 0.4 respectively). Researchers suggested that longer-term studies would be beneficial to compare lasting effects of culturally appropriate diabetes education (Attridge, Creamer, Ramsden, Cannings-John, & Hawthorne, 2014).

Impact of Interpretation Services

Research has demonstrated that language interpretation can counteract barriers and promote positive diabetes outcomes (Wilhelm et al., 2016, & Njeru et al., 2017). Njeru et al. (2017) completed a retrospective cohort study to determine adherence with diabetes management

and outcomes when comparing patients needing interpretation services to those who did not. Interestingly, patients requiring interpretative services were more likely to meet recommendations, when age-adjusted, for blood pressure (*OR* = 2.02), HgA1c (*OR* = 1.4) and LDL levels (*OR* = 1.4). The researchers concluded that further research is needed on the impact of health literacy on diabetes outcomes, especially as it relates to underserved populations such as refugees and immigrants (Njeru et al., 2017).

Wilhelm et al. (2016) used a quantitative approach to describe regional variation in diabetic outcomes by country-of-origin and language in an urban hospital. This large study assessed diabetes outcomes in 5,460 adult participants, speaking 25 different languages. Researchers found that Spanish speakers were more likely to achieve target blood pressure, LDL levels, and HgA1c. Conversely, Ethiopian and Somali participants had the least favorable outcomes. Researchers additionally suggested that language interpretation can counteract barriers and promote positive diabetes outcomes. Finally, it was suggested that further research be conducted to assess diabetes care in this underserved population (Wilhelm et al., 2016).

Diabetes Knowledge

A few studies assessed diabetes knowledge in immigrant and refugee popuations (Njeru et al., 2016, Njeru et al., 2015, & Gao, Cook, & Mayhew, 2018). Njeru et al. (2016) examined diabetes knowledge, attitudes, and behaviors among Somali and Latino immigrants. The researchers utilized a qualitative approach, interviewing 78 patients with type 2 diabetes from Somali and Latino communities. Diabetes management was analyzed and participant engagement, self-efficacy, and social support were all identified as assets for improved outcomes. Researchers suggested further studies on the implications of immigration, socioeconomic, and linguistic factors on diabetes knowledge (Njeru et al., 2016).

Technology Use for Education

Research suggests that video-based health education may be a useful tool for culturally diverse populations (Njeru et al., 2015, Wieland et al., 2013, & Wieland et al., 2012). Njeru et al. (2015) used a qualitative, focus group approach to develop a diabetes digital storytelling intervention with and for immigrant and refugee populations. From these participants, four culturally appropriate videos were created on the topics of medication management, glucose self-monitoring, physical activity, and nutrition for diabetes. Researchers concluded that utilizing a community-based intervention to address health education in diverse populations may be a useful tool (Njeru et al., 2015).

In a study by Wieland et al. (2013), a video-based tuberculosis educational module was evaluated for its usefulness in an adult education center. The sample consisted of 159 adult students at Hawthorne Education Center in Rochester, Illinois. The students were primarily refugees and immigrants, with English being their second language. Seventy different languages were represented by the population. The English tuberculosis video was original and created following a focus group. The goals were to generally increase awareness of tuberculosis, by discussing transmission and treatment options. The video was assessed on three criteria: acceptability, knowledge, and self-efficacy. Study results showed that the video was highly acceptable to the population, with 94% expressing approval. There was also an increase in knowledge about tuberculosis. With participants achieving 56% of the questions correct on the pretest and 82% correct on the posttest. Finally, participants also increased self-efficacy (77% to 90%) as evidenced by an expression of knowledge of how to obtain tuberculosis care or

screening if needed. Researchers concluded that video-based education modules may be a useful tool for educating diverse ethnic groups on important health topics (Wieland et al., 2013).

In an effort to create a culturally appropriate exercise and nutrition program for immigrant and refugee women, Wieland et al. (2012) utilized community-based participatory research. This qualitative, focus group approach included women from Somalia, Cambodia, and Hispanic countries. Following the pilot study, the women reported weight loss ($p = .65$) and that they were more likely to exercise regularly ($p = .001$). Researchers suggested further studies regarding community-based physical activity and nutrition programs with other immigrant and refugee populations.

Analysis of the Evidence

A large, systematic review suggested that culturally appropriate type 2 diabetes health education can improve outcomes (Attridge et al., 2014). Some studies have utilized ethnically diverse focus groups to create culturally appropriate diabetes education. Positive results have been seen with these efforts (Njeru et al., 2015). Two studies reviewed utilized video-based health education as a teaching tool, however only one of these studies was related to diabetes. Wieland et al. (2013) suggested that video-based health education may be an acceptable solution to providing consistent, high quality, culturally sensitive education to refugee and immigrant patients. In this study, the health education video was only presented in English; however other translational options may also be beneficial in linguistically diverse populations (Njeru et al., 2017).

Several limitations were noted in the research. Few studies have been completed regarding culturally appropriate diabetes education for immigrant and refugee populations, and even fewer have been completed on the appropriate educational tools to utilize for this diverse

population. Providing culturally appropriate health education in a busy clinic setting can be a challenge, especially when multiple languages are spoken. There remains a gap in the literature regarding time efficient education solutions to address these needs.

Two content experts were noted in the research reviewed; Dr. Mark L. Weiland and Dr. Jane W. Njeru. Both were associated at some level with seven out of the eight studies discussed. As a result, some of the studies analyzed the same or similar population groups, located in Rochester, Minnesota. These authors, internal medicine physicians, are associated with the Mayo Clinic and conflicts of interest were not discussed in the articles. Further studies utilizing refugee and immigrant populations in other areas of the United States and studies with a strong interdisciplinary approach would be beneficial. De Chasney and Anderson (2016) suggest that nurses may be better positioned than other health care professional to impact the health care of immigrants and refugees. Due to their holistic approach and commitment to health education, studies conducted by nurses could greatly benefit the body of knowledge on this topic. Although no related doctor of nursing practice (DNP) translational projects were identified in the literature review, it may be an appropriate topic of investigation for these nurse leaders.

Theoretical Framework

When discussing chronic disease conditions, such as diabetes, the Wagner Chronic Care Model (CCM) is a useful framework for planning disease care delivery (De Chasnay & Anderson, 2016). There are six key elements of the Chronic Care Model: healthcare organization, self-management support, decision support, clinical information systems, delivery system design, community support and policies. The goal of these interrelated elements is to use existing resources, create new ones, and promote interaction between healthcare systems and the communities they serve (Baptista et al., 2016).

Considering the element of healthcare organization, the PI identified organizational challenges such as long wait times as an opportunity for intervention. Key stakeholders decided to capture this time by utilizing video-based diabetes education in waiting rooms. The element of self-management support was utilized in creating culturally sensitive education. The video discussed culturally appropriate dietary choices to minimize the effects of diabetes and improve glycemic control. Research supports improved diabetes outcomes when patients receive culturally sensitive educations (Wieland et al., 2012, & Attridge et al., 2014).

The element of delievery system design was considered when determining the most effective tool for education in this population. Research suggested that video-based health education may be a useful tool for a culturally diverse population (Njeru et al., 2015, Wieland et al., 2013, & Wieland et al., 2012). It was further suggested that language interpretation could also counteract barriers and promote positive diabetes outcomes (Wilhelm et al., 2016, & Njeru et al., 2017). Therefore, a culturally sensitive diabetes educational video was created and translated into English, Arabic, and Hindi.

In a large systematic review of the literature, researchers found that the most commonly used elements of the Chronic Care Model were delivery system design and self-management support (Davy et al., 2015). Research has shown that using a combination of elements may be most effective in improving chronic care delivery (Baptista et al., 2016).

Little research has been done on how Wagner's Chronic Care Model specifically relates to diabetes care in refugee and immigrant populations. However, community support, healthcare organization, culturally appropriate self-management education, and system design are common themes for improved diabetes outcomes for refugee and immigrant populations (Attridge et. al.,

2014). Most of the articles reviewed in this literature synthesis have highlighted at least one element of the Chronic Care Model.

Additional Concepts

In addition to the concepts in the theoretical framework, adult learning and cultural competency concepts were also utilized in this project. De Chesnay and Anderson (2016) describe cultural competence as an attitude of sensitivity and respect toward different cultures. Healthcare professionals are encouraged to model this concept while caring for clients. This is done, not only during direct patient care, but also while educating patients on pertinent health topics. Using familiar terminology and culturally acceptable health promotion examples are ways that cultural competency will be exhibited in this study.

According to Knowles Adult Learning Principles, adult learners are most interested in topics that have immediate relevance and directly impact their health and personal life (Decelle, 2016). The health education presented in this study will be brief and designed to directly impact the participant's current health condition, which will likely improve the acceptability of the intervention.

Goals and Objectives

The purpose of the translational research project was to assess the effectiveness of a culturally sensitive, video-based diabetes health education video on knowledge of diabetes, acceptability, and self-efficacy in adults speaking select languages (English, Arabic, and Hindi) and receiving care at Clarkston Community Health Center (CCHC).

The specific aim of this project was to create culturally sensitive, evidence-based diabetes health education in a video format that was translated into English, Arabic, and Hindi with

closed-captioning to meet the identified health education and language needs of the clinic. The researcher will answer the following clinical questions:

1. What demographic factors (age, gender, primary language, education level, and years lived in the United States) are associated with increased knowledge following the diabetes health education intervention.

2. What demographic factors (age, gender, region of birth, primary language, education level, and years lived in the United States) are associated with acceptability of the diabetes health education intervention.

3. What demographic factors (age, gender, primary language, education level, and years lived in the United States) are associated with self-efficacy following the diabetes health education intervention.

4. Will a culturally sensitive, evidence-based diabetes health education video increase knowledge of diabetes in patients speaking Arabic, Hindi, or English at Clarkston Community Health Center?

5. Will a culturally sensitive, evidence-based diabetes health education video be an acceptable educational solution in patients speaking Arabic, Hindi, or English at Clarkston Community Health Center?

6. Will a culturally sensitive, evidence-based diabetes health education video improve self-efficacy in patients speaking Arabic, Hindi, or English at Clarkston Community Health Center?

Qualitative clinical questions included:

What are common themes regarding the dietary implications of living with diabetes?

What are common themes regarding individual perceptions of diabetes?

What are common themes regarding the diabetes education needs of specific cultures?

Project Design

The design for this translational research project was a pretest/posttest, mixed methods study. The subjects in this study were examined for knowledge level before and after the health education intervention. Acceptability, self-efficacy, and qualitative questions were assessed after the intervention.

The diabetes health education video was created by senior Bachelor of Science in Nursing students and media students from the University of North Georgia. Educational content reflected recommendations from the American Diabetes Association (ADA).

Inclusion criteria included adult patients (males and females) 18 years and older attending Clarkston Community Health Center with the diagnosis of diabetes or pre-diabetes. Participants were required to be able to read and write in English, Arabic, or Hindi. Participants who were willing and able to participate signed the informed consent. Exclusion criteria included patients younger than 18 years old or those that had not been diagnosed with diabetes or pre-diabetes. If a participant was not able to read or write in English, Arabic, or Hindi, they were excluded.

Methods

Measurement Instruments

The demographic tool (Appendix C) was developed by the PI and reviewed for content validity by the committee members. The initial assessment questionnaire included age, gender, region of birth, primary language, education level, and years lived in the United States. Descriptive statistics were used to assess the demographic data, with measures of central tendency and variability being reported.

Pre and post intervention diabetes knowledge were assessed with the Revised Diabetes Knowledge Test (DKT2) (Appendix D). The DKT2 contains two sections. The first is a 14-item general diabetes knowledge test and the second is a 9-item test regarding insulin use. For the purposes of this project, only the general knowledge questions were used. The test took approximately 10 minutes to complete. The test's readability was calculated at a fourth-grade level by the Flesch-Kincaid grade level. Cronbach's coefficient alpha demonstrated reliability for the general test (.77) and the insulin subscale (.84). Samples were examined for validation testing with Bonferroni adjustment for multiple statistical tests (p = .02) (Fitzgerald et al., 2016). The author of the DKT2 gave the PI permission (Appendix J) to use, revise, and translate the tool. The PI agreed to send the author a copy of the translated tool once the study is complete.

Culturally specific diabetes knowledge questions (Appendix E) and qualitative research questions (Appendix G) were developed by the PI and reviewed for content validity by the research committee, Dr. Gulshan Harjee, and two diabetes educators that care for immigrant and refugee populations.

Likert scale questions regarding acceptability and self-efficacy (Appendix F) were completed by the participant after viewing the video. Acceptability of the health education and self-efficacy were assessed using a health communication tool adapted from the National Cancer Institute (U.S. Department of Health and Human Services, 2004). No specific reliability or validity statistics were available for this tool; however, these items were recently used in a diabetes health education interventional study for immigrant and refugee adults in Minnesota (Wieland et al., 2017).

Data Collection Procedure

The participant began by completing the demographic data (age, gender, region of birth, primary language, education level, and years lived in the United States), the revised brief diabetes knowledge test, and the culturally specific diabetes knowledge questions. Next, the participants viewed the video-based diabetes health education. After the participant completed the video, they repeated the revised diabetes knowledge test and culturally specific diabetes knowledge questions. Finally, they answered questions regarding acceptability and self-efficacy related to the intervention. At the end, the participant had the option of answering open-ended questions regarding perceptions, dietary implications, and health education needs regarding diabetes.

All information obtained remained password protected and stored securely on a Microsoft SQL server database. No personal information was stored on the database. All data collected was analyzed with SPSS version 24.0 to answer each specific research question and the results will be disseminated through a peer reviewed journal, conference podium, or poster presentation. All data will be reported in aggregate to keep patient confidentiality. Collected data will be kept on a secure network for five years.

Sampling Plan

After receiving IRB approval (Appendix I), the researcher enrolled subjects that met the inclusion and exclusion criteria. Recruitment of a convenience sample was conducted in June and July 2018 from Clarkston Community Health Center. Participants were informed of the study by the receptionist at check-in.

Each subject voluntarily participated with the ability to cancel his or her participation at any time during the study without reason. Patients also had the option of viewing the diabetes

health education video without participating in the study. Patients that did not meet the inclusion criteria, but desired diabetes health education were provided written or oral education in their primary language. The first 32 subjects that expressed an interest in participating in the research study received a detailed informed consent (Appendix H). A copy of the signed consent form was provided to the participant for their records.

The consent, video, and tools were translated into the participant's primary language (English, Arabic, or Hindi) by a trained medical translator. All translated content was validated by two independent reviewers fluent in the language. The video audio was in English and the closed captioning was in the participant's primary language.

Protection of Human Subjects

Consent from CCHC and Georgia College and State University (GCSU) Institutional Review Board (IRB) was obtained prior to beginning the recruitment of participants for this study. Each subject voluntarily participated with the ability to cancel his or her participation at any time during the study without reason.

After the participant signed the informed consent it was kept in a locked cabinet until it could be scanned and stored on a protected and secure network. The informed consent was obtained by the PI only. Each participant was given a copy of the informed consent for their records.

To ensure confidentiality, an identification number was assigned to each participant prior to starting data collection and was known only by the PI and participant. The identification number was on all questionnaires. Only the PI had access to the participant's identity and identification number. All information obtained remained password protected and stored securely on a Microsoft SQL server database. No personal information was stored on the

database. All data will be reported in aggregate to keep patient confidentiality. Collected data will be kept on a secured network for five years. After five years, the PI will destroy the data by erasing it according to the GCSU record retention policy.

Video-based diabetes health education is considered incredibly safe with minimal side effects, not more than typical day to day stressors. Participants did not receive any compensation to participate in the study. The data obtained was not related to illegal activities and no information was obtained about immigration status. No compensation or incentive was received by the researcher or clinic related to this study.

Anticipated benefits for the participants was an improved understanding of the diabetes health topics presented. The healthcare providers at Clarkston Community Health Center identified a need for culturally sensitive diabetes health education that could be translated into a variety of languages. This study evaluated if video-based diabetes health education is an effective educational solution for this diverse population.

Results

The specific aim of this project was to create culturally sensitive, evidence-based diabetes health education in a video format that was translated into English, Arabic, and Hindi with closed-captioning to meet the identified health education and language needs of the clinic. An alpha level of .05 was used for all statistical tests, resulting in a 95% confidence interval.

Sample

Thirty-two subjects participated in the study (Table 1). Slightly over half (53.1%) were male and 46.9% were female. The age range was 20 to 81 years, with the mean being 53.6 years (*SD* = 14.21). Birth regions were divided into five categories: Africa (34.4%), North or South America (12.5%), Asia (43.8%), Middle East (9.4%), and Europe (0%). Asia and Africa were

the most common regions of birth for the sample. Participants lived in the United States between one and sixty-one years (M = 11.22, SD = 14.42). All subject could speak, read, and write in at least one of the three languages offered and considered it their primary language. English was the most common language (46.9%), second most common was Hindi (34.4%) and the least common was Arabic (18.8%). The population was generally well educated, with only 21.9% having less than a high school education. Thirty-seven percent (37.5%) reported graduating from high school. The remaining forty percent (40.6%) attended at least some college, with 25% of participants being a college graduate and 12.5% obtaining a graduate degree. Most participants (59.4%) stated that they prepared most of their meals, one quarter (25%) had a spouse that prepared the meals, and one eighth (12.5%) had another family member or friend that prepared their meals. Only three (3.1%) percent of participants ate most of their meals at a restaurant.

What demographic factors (age, gender, primary language, education level, and years lived in the United States) are associated with increased knowledge following the diabetes health education intervention.

Knowledge was assessed comparing the variables of age, gender, primary language, education level, and years lived in the United States. Using the Independent-Samples Kruskal-Wallis Test, no significant difference was seen in the distribution of the pretest DKT2 score related to gender (p = .682), primary language (p = .582), or education level (p = .655). Using the Independent-Samples Mann-Whitney U Test, no significant difference was seen in the distribution of the pretest DKT2 score related to age (p = .770) and years lived in the United States (p = .093). Likewise, no significant difference was seen in the distribution of the posttest DKT2 score related to primary language (p = .537), education level (p = .640), age (p = .318), or years lived in the United States (p = .516). There was noted to be a significant difference in

distribution of the posttest DKT2 score related to gender (p = .018) seen with the Independent Samples Mann-Whitney U Test.

The culturally specific diabetes knowledge questions were also assessed with the same variables. Using the Independent-Samples Kruskal Wallis Test, no significant difference was seen in the distribution of the pretest culturally specific diabetes knowledge score related to primary language (p = .657) or education level (p = .759). Using the Independent-Samples Mann-Whitney U Test, no significant difference was seen in the distribution of the pretest culturally specific diabetes knowledge score related to age (p = .770) or gender (p =.261). The Independent-Samples Mann-Whitney U, suggested a statistically significant difference in distribution of the pretest culturally specific diabetes knowledge questions score related years lived in the United States (p = .004). Likewise, no significant difference was seen in the distribution of the posttest culturally specific diabetes knowledge score related to primary language (p = .320), educational level (p = .538), age (p = .545), gender (p = .202), or years lived in the United States (p = .486).

What demographic factors (age, gender, region of birth, primary language, education level, and years lived in the United States) are associated with acceptability of the diabetes health education intervention.

Distribution of acceptance was assessed comparing the variable categories of age, gender, primary language, education level, region of birth and years lived in the United States for each statement measured. The first Likert scale statement evaluated was: the diabetes video was easy to understand. When comparing the variables of age (p = .358), gender (p = .941), and years lived in the United States (p = .456) using the Independent-Samples Mann Whitney U Test, there was no significant difference in distribution across the variable categories. Likewise, using the

Independent-Samples Kruskal-Wallis Test for the variables of primary language (p = .308), educational level (p = .202), and region of birth (p = .488), there was no significant difference in distribution across the variable categories.

The final Likert scale acceptance statement assessed was: health education videos are an effective way for me to learn more about my health. The same nonparametric tests were performed. No significant difference in distribution was seen in the variable categories of age (p = .495), gender (p = .655), years lived in the United States (p = .943), primary language (p = .687), educational level (p = .221), or region of birth (p = .483).

What demographic factors (age, gender, primary language, education level, and years lived in the United States) are associated with self-efficacy following the diabetes health education intervention.

Perceived self-efficacy was measured by three questions: the diabetes video helped me learn about diabetes; the video helped me understand changes I can make to my diet to improve my diabetes; and the video helped me understand how to monitor my blood sugar at home. A five-point Likert scale was used to measure self-efficacy, with one representing strongly disagree and five representing strongly agree.

Distribution of self-efficacy was assessed comparing the variable categories of age, gender, primary language, education level, region of birth and years lived in the United States for each statement measured. The first Likert scale statement evaluated was: the diabetes video helped me learn about diabetes. When comparing the variables of age (p = .770), gender (p = .941), and years lived in the United States (p = .427) using the Independent-Samples Mann Whitney U Test, there was no significant difference in distribution across the variable categories. Likewise, using the Independent-Samples Kruskal-Wallis Test for the variables of primary

language (p = .141), educational level (p = .514), and region of birth (p = .477), there was no significant difference in distribution across the variable categories.

The next self-efficacy Likert scale statement assessed was: the video helped me understand changes I can make to my diet to improve my diabetes. No significant difference in distribution was seen in the variable categories of age (p = .830), gender (p = .682), or years lived in the United States (p = .486) using the Independent-Samples Mann Whitney U Test. Likewise, using the Independent-Samples Kruskal-Wallis Test for the variables of primary language (p = .393), educational level (p = .535), and region of birth (p = .621), there was no significant difference in distribution across the variable categories.

Finally, the last self-efficacy Likert scale statement assessed was: the video helped me understand how to monitor my blood glucose at home. The same nonparametric tests were performed. No significant difference in distribution was seen in the variable categories of age (p = .711), gender (p = .882), years lived in the United States (p = .683), primary language (p = .565), educational level (p = .283), or region of birth (p = .927).

Will a culturally sensitive, evidence-based diabetes health education video increase knowledge of diabetes in patients speaking Arabic, Hindi, or English at Clarkston Community Health Center?

Diabetes knowledge was measured by the Revised Diabetes Knowledge Test (DKT2) before and after the intervention. The overall pre-test DKT2 mean score was 48.66% (SD = 23.12) and the post-test DKT2 mean score was 73.21% (SD = 21.16). This represented a 24.55% (SD = 26.84) increase in mean score following the intervention. A paired samples t-test revealed a statistically significant difference in knowledge between the pretest and posttest score, t (31) =

5.174, $p = .000$. Cronbach's coefficient alpha demonstrated reliability for the use of the DKT2 in this study (.894). Table 2 shows the individual question scores as well as the overall test results.

Culturally specific diabetes knowledge questions were also developed by the PI to assess knowledge of healthy dietary choices specific to the population. The pretest mean score was 60.31% ($SD = 23.62$) and the post-test score was 78.44% ($SD = 22.45$). This represented an 18.13% ($SD = 25.33$) increase in mean score. A paired samples t-test revealed a statistically significant difference in knowledge between the pre-test and post-test culturally specific diabetes knowledge questions score, $t(31) = 4.05$, $p = .000$. Cronbach's coefficient alpha demonstrated reliability of the culturally specific diabetes knowledge questionnairre in this study (.910). Table 3 details the pre and post-test scores and change in scores by question.

Will a culturally sensitive, evidence-based diabetes health education video be an acceptable educational solution in patients speaking Arabic, Hindi, or English at Clarkston Community Health Center?

Acceptance was measured with two Likert scale statements: the diabetes video was easy to understand, and health education videos are an effective way for me to learn more about my health. The statements were scored on a one to five scale, with one meaning strongly disagree and five meaning strongly agree. The mean Likert score for the statements were as follows: the diabetes video was easy to understand ($M = 4.59$, $SD = .665$), and health education videos are an effective way for me to learn more about my health ($M = 4.72$, $SD = .457$). Considering that a score of four represents agree and five represents strongly agree, these results represent a high level of acceptability.

Will a culturally sensitive, evidence-based diabetes health education video improve self-efficacy in patients speaking Arabic, Hindi, or English at Clarkston Community Health Center?

A five-point Likert scale was used to measure self-efficacy, with one representing strongly disagree and five representing strongly agree. Cronbach's coefficient alpha for this study demonstrated reliability of the acceptability and self-efficacy tool (.889). The mean Likert score for the statements are as follows: the diabetes video helped me learn about diabetes (M = 4.72, SD = .52); the video helped me understand changes I can make to my diet to improve my diabetes (M = 4.69, SD = .22); the video helped me understand how to monitor my blood glucose at home (M = 4.75, SD = .44). With a score of four representing agree and five representing strongly agree, the results suggest a high level of perceived self-efficacy following the intervention.

Qualitative Questions

Qualitative questions were not statistically analyzed since only three of the thirty-two participants completed these optional questions.

Interpretation/ Discussion

Results suggest a statistically significant increase in knowledge following a culturally sensitive diabetes educational video, as measured by a pre and posttest of the DKT2 ($t(31)$ = 5.17, p = .000) and culturally specific knowledge questions ($t(31)$ = 4.05, p = .000). There was no difference in score distribution for the DKT2 related to demographic variables, except for gender on the posttest score (p = .018). It is unclear why a difference in gender scores were seen following the intervention. No studies were identified in the literature review with similar results. Tenkorang (2017) suggested gender disparities related to development of diabetes in

immigrants, but related these differences to lifestyle factors, not necessarily to knowledge levels. Additional studies will be needed to determine if this trend continues.

The culturally specific knowledge questions also showed one significant demographic variable that revealed a difference in score distribution. Years lived in the United States showed a statistically significant difference in distribution of scores on the pretest ($p = .004$). This finding suggests that the participants' familiarity with culturally specific foods may be impacted by the length of time they had been living in the United States. Following the intervention, however, no significant difference in distribution was noted in any demographic variables, suggesting an increase in knowledge for all subgroups.

Participants overall found great value and promotion of self-efficacy in the video-based diabetes education. They strongly agreed that the diabetes video helped them learn about diabetes ($M = 4.72$, $SD = .52$) and changes that they can make to their diet to improve diabetes ($M = 4.69$, $SD = .22$). They also agreed that it helped them understand how to monitor their blood glucose at home ($M = 4.75$, $SD = .44$). Self-efficacy improvement was seen across all demographic variables, with no variables showing a significant difference in distribution. These findings suggest that video-based diabetes education may be an effective tool to increase self-efficacy in diverse population groups.

Participants reported a high level of acceptance with this form of diabetes education. Most strongly agreed that the health education video was easily understandable ($M = 4.59$, $SD = .67$) and was an effective way for them to learn about their health ($M = 4.72$, $SD = .46$). High levels of acceptance were reported across all demographic variables with no significant difference in distribution. These findings are valuable considering the education was offered in three different translations. More studies are needed to assess the effectiveness and acceptance

of video-based health education for diverse cultural groups, but the findings of this study suggest it may be a promising solution for a busy, culturally diverse, primary care clinic setting.

Strengths of the Study

The strengths of this study were primarily related to multiple levels of collaboration and support for the project. This project was not only an educational experience for the participants, but University of North Georgia BSN and media students were also able to learn how to create a useful, culturally sensitive educational tool. They learned concepts of health promotion and disease prevention and the challenges of creating a tool that meets a variety of patient needs. Students expressed a positive experience with the project and an interest in future population health related endeavors.

The founders of the clinic graciously provided space and organizational support. Since patient education was a desire of the organization, the project was fully accepted and promoted. CCHC volunteers also assisted in supplying and installing the computers, Miracast, and video monitors for the project. Without the support of numerous individuals, the project would not have been such a success.

This study also allowed the PI to meet some personal goals related to advanced nursing practice. The translational project provided opportunities for leadership, personal, and professional growth. It allowed the PI to provide meaningful educational opportunities for an underserved population, as well as facilitate interprofessional educational opportunities in both academic and private settings. The study will provide a foundation for future population health focused research.

Limitations/ Barriers of the Study

There were a few limitations to the study. The study utilized a convenience sample from a small, free clinic in Clarkston, Georgia. There was a small sample size, with only thirty-two participants, which makes the study less generalizable. The participants spoke three primary languages, English, Arabic, and Hindi. Although the translated materials were reviewed by three separate individuals for each language, it is difficult to determine if the translations were completely understandable to the participants. There can be many different dialects within a single language and reading levels can greatly vary.

Barriers also include the accessibility and cost of translational services. Translation of educational material can take a significant amount of time, especially when multiple reviewers are needed. Some languages are more commonly spoken and more readily available for translation. This will need to be considered with future studies.

The setting of the project may have also impacted the results. All education was completed in a busy waiting room, with distractions and noise present. A quiet, more private setting may have increased the potential for learning.

Implications for Future Research

Future studies are recommended for the use of video-based education for diverse populations. Studies are needed to evaluate the acceptability of this technology in different ethnic groups. Since real-time translation can sometimes be difficult and expensive to obtain, trialing short, translated videos related to various health topics may continue to be helpful. A comprehensive needs assessment to identify educational gaps in specific populations is recommended to guide implementation and future research.

Additional research should also assess short-term and long-term diabetes outcomes following educational interventions in diverse ethnic groups. Gender differences and years lived in the United States should be further evaluated to determine implications and possible appropriate interventions.

Sustainability

Clarkston Community Health Center has embraced the results of this study and intends to implement video-based health education in all waiting areas. Key stakeholders have suggested additional health topics and translations needed. CCHC is currently creating a library of videos that can be viewed in the office as well as online through the CCHC YouTube channel. The patient will be able to access the topic and language that they desire by connecting to the link provided. As a result of this study, CCHC volunteers and UNG nursing students have developed thirty more brief translated videos on the topics of tuberculosis, asthma, stroke, heart disease, hypertension, handwashing, accessing health care and more. BSN nursing students will continue to create additional videos to further expand the library.

Other free clinics and health departments have been identified as potential sites to utilize this educational tool. This research will be further disseminated through local inservices and presentations, state or national podium or poster presentations, and/or peer reviewed journal publications.

Conclusion

Refugees and immigrants are a vulnerable population in need of quality medical care for chronic conditions. Clarkston Community Health Center (CCHC) had an opportunity to provide culturally appropriate diabetes health education to this population. Since CCHC is a free clinic and patients are mostly seen on a walk-in basis and can wait for more than an hour for care,

providers and staff at CCHC identified a need to provide health education while the patient was in the waiting room. This study focused on diabetes education, but topics could be expanded to numerous acute and chronic conditions. Viewing a video prior to seeing the provider may prompt increased discussion about care. Closed captioning in select languages may allow additional accessibility for non-English speaking patients.

This study suggests that culturally sensitive, video-based diabetes education can increase knowledge of diabetes, have a high perceived self-efficacy, and be an acceptable educational medium in a culturally diverse primary care clinic. These results are consistent with a recent study by Gao, Cook, and Mayhew (2018), who concluded that a culturally-tailored, multi-lingual health promotion video increased knowledge, was an acceptable education tool, and may facilitate behavior change in a culturally diverse population. The languages evaluated by these researchers were Tagalog, Vietnamese, Korean, Punjabi, Mandarin, and English and the health topic was tuberculosis (Gao, Cook, & Mayhew, 2018).

Research supports culturally appropriate diabetes health education for refugee and immigrant patients. Creating health education to meet this need is the biggest challenge. Video-based education translated in select languages may be a viable option to meet this need. This media can better utilize wait time by presenting educational information. The goal of this project was to increase diabetes knowledge and ultimately improve diabetes outcomes in a diverse population. This study suggests that video-based diabetes health education may be a means to make this goal a reality.

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Appendix A

Video-Based Diabetes Education for a Culturally Diverse Population at Clarkston Community Health Center

January 31, 2018

Georgia College Institutional Review Board,

Based on my review of the proposed research by Heather Harris, I give permission for her to conduct the project entitled Video-Based Diabetes Education for a Culturally Diverse Population within Clarkston Community Health Center. As part of the project, I authorize the researcher to create culturally appropriate diabetes health education videos and then show the created videos to patients diagnosed with diabetes or pre-diabetes. As part of the project, we understand that the researcher will conduct a pretest and posttest to evaluate diabetes knowledge, acceptability, and self-efficacy. We understand that the participation of patients in the research will be voluntary and at their own discretion.

We understand that our organization's responsibilities would include: 1.) assigning the researcher an appropriate space that would be appropriate for the implementation of this project; 2.) informing potential participants of the research study; 3.) providing access to patient medical records to verify diabetes or pre-diabetes diagnosis; 4.) and facilitating the researcher in presenting the findings of her project to the stakeholders. We also understand that we reserve the right to withdraw from the study at any time our circumstances change.

The anticipated time for the implementation and evaluation of this project is from spring to fall, 2018. I understand that the data collected will remain entirely confidential and may not be provided to anyone outside of the research team. All presentation of data will be in a de-identified and aggregate form to ensure confidentiality.

Sincerely,

Dr. Gushan Harjee
Medical Director of Clarkston Community Health Center

2/8/17

Appendix B

```
1
00:00:04,570 --> 00:00:09,780
What is diabetes? Diabetes is a disease
that affects how the body uses glucose,

2
00:00:09,780 --> 00:00:12,770
a sugar that is the body's
main source of fuel.

3
00:00:12,770 --> 00:00:17,770
Your body needs glucose to keep running.
Here's how it works. Imagine this is a blood vessel.

4
00:00:18,410 --> 00:00:23,730
After you eat, glucose from food gets into
your blood. This picture represents your pancreas,

5
00:00:23,730 --> 00:00:28,440
which is an organ in your body that makes a hormone called
insulin. Insulin works like a key

6
00:00:28,440 --> 00:00:32,789
to help glucose in the blood get into the body's
cells. This allows the body to get the energy it needs.

7
00:00:36,400 --> 00:00:40,821
When you have diabetes your body
either can't make insulin or

8
00:00:40,821 --> 00:00:45,231
the insulin doesn't work in the body like
it should. This means the glucose can't get

9
00:00:45,231 --> 00:00:49,710
into the cells normally and this causes
a lot of glucose to be in the blood.

10
00:00:49,710 --> 00:00:53,861
If a lot of glucose is in the blood,
the blood glucose level gets too high,
```

```
11
00:00:53,861 --> 00:00:56,391
which makes people sick if
they don't get treatment.

12
00:00:57,571 --> 00:01:00,611
People from all over the world
are diagnosed with diabetes.

13
00:01:00,611 --> 00:01:04,510
People with diabetes need to adjust their
eating habits to live healthy lives and

14
00:01:04,510 --> 00:01:08,841
avoid complications. What are the major
symptoms of diabetes?

15
00:01:08,841 --> 00:01:13,481
Being very thirsty no matter how much you drink. Being
very hungry no matter what you eat.

16
00:01:13,481 --> 00:01:15,151
And, urinating much more than usual.

17
00:01:21,921 --> 00:01:25,450
So, let's talk about what kind of
foods people with diabetes should eat,

18
00:01:25,450 --> 00:01:29,520
what is good in moderation, and
what kinds of food is best to avoid.

19
00:01:29,520 --> 00:01:32,471
The diabetes diet focuses
on limited carbohydrate and fats,

20
00:01:32,471 --> 00:01:37,221
which is a healthy way for most
people to eat. These are some pictures of healthy foods.

21
00:01:42,738 --> 00:01:47,108
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Carbohydrates are class of food that
contain starches and sugars, and

22
00:01:47,108 --> 00:01:51,419
can be called simple or
complex. Particularly simple carbohydrates

23
00:01:51,419 --> 00:01:55,889
in excess cause your blood glucose to go
up and excessive consumption of fats can

24
00:01:55,889 --> 00:02:00,299
lead to long term problems such as heart
disease. These are some foods that are high

25
00:02:00,299 --> 00:02:05,098
in simple carbohydrates. We can separate
these foods into three categories: green,

26
00:02:05,098 --> 00:02:09,439
yellow, and red. Green means good foods
that you can always enjoy, yellow

27
00:02:09,439 --> 00:02:13,869
means that those foods should be eaten in
moderation, and red means that those foods

28
00:02:13,869 --> 00:02:18,759
should be eaten less often. Some examples
of green foods or foods I can always eat

29
00:02:18,759 --> 00:02:23,789
are steamed vegetables, lean meats
such as fish, chicken, or lamb and low-fat yogurt or milk.

30
00:02:25,199 --> 00:02:26,969
Shredded cabbage, broccoli, or

31
00:02:26,969 --> 00:02:32,199
cauliflower is also a healthy food to eat instead of
white rice. Cabbage does not spoil easily and
```

32
00:02:32,199 --> 00:02:37,239
can be topped with stew or curry. Vegetable
curry, green salad and hummus, and grilled eggplant

33
00:02:38,388 --> 00:02:40,719
with sumac aioli are healthy choices.

34
00:02:42,109 --> 00:02:47,099
What kind of foods are okay to eat sometimes
or in small portions? Some yellow foods

35
00:02:47,099 --> 00:02:51,968
include nuts, whole grain
breads, olive oil, olives, and seeds.

36
00:02:51,968 --> 00:02:56,139
Some helpful tips for yellow foods
are choosing whole grain breads and

37
00:02:56,139 --> 00:03:01,199
eating small portion sizes. For
example, wheat chapattis could be substituted for

38
00:03:01,199 --> 00:03:05,799
white nan as a healthy alternative. So
what kind of foods are in the red category?

39
00:03:05,799 --> 00:03:10,409
Foods high in simple carbohydrates include
white potatoes, white rice, white flour

40
00:03:10,409 --> 00:03:14,879
bread, most fruit juices, other sweetened
beverages like regular soda, and

41
00:03:14,879 --> 00:03:20,349
canned fruit in heavy syrup. All of these
will make your blood sugar go up. Fruit and

42
00:03:20,349 --> 00:03:23,309
fruit juices can be tricky.

Even though some juices and

43
00:03:23,309 --> 00:03:27,498
fruits have no sugar added, they still
contain natural sugars which can cause

44
00:03:27,498 --> 00:03:32,998
your blood sugar to go up. Foods high in
fat include oils, fried foods, ghee, whole

45
00:03:32,998 --> 00:03:38,208
milk, and corn. Ugali is considered a food to
avoid. It consists of thickened cornmeal and

46
00:03:38,208 --> 00:03:42,319
is high in simple carbohydrates and
fat. What does a free food mean?

47
00:03:42,319 --> 00:03:45,869
Some foods and drinks can be taken without
affecting your blood glucose level.

48
00:03:45,869 --> 00:03:50,299
These are called free, which means you
may have them as much as you like.

49
00:03:50,299 --> 00:03:54,198
Free foods are any food that has less
than twenty calories per serving.

50
00:03:55,358 --> 00:04:00,758
Free drinks include: unsweetened tea,
black coffee, clear soups like consommé,

51
00:04:00,758 --> 00:04:06,498
and diet soft drinks. Free
vegetables are asparagus, garlic,

52
00:04:06,498 --> 00:04:11,719
leeks, capsicum, onions,
chilies, eggplant, fennel,

53
00:04:11,719 --> 00:04:16,649
and zucchini. Some other items that are also
considered to be free foods are herbs and

54
00:04:16,649 --> 00:04:22,289
spices, low calorie jams, low calorie salad
dressing, vinegar of all varieties, and

55
00:04:22,289 --> 00:04:24,039
artificial sweeteners.

56
00:04:24,039 --> 00:04:27,569
With all this in mind, what does a well balanced
meal and eating plan look like?

57
00:04:28,749 --> 00:04:33,419
Stick to a regular schedule for meals.
Eat the same time every day as much as

58
00:04:33,419 --> 00:04:37,649
possible. Each meal should have a similar
amount of protein, carbohydrates, and

59
00:04:37,649 --> 00:04:42,729
fats. Protein intake should
make up ten to twenty

60
00:04:42,729 --> 00:04:47,639
percent of your diet. Some healthy protein
choices include baked fish, lean lamb, and

61
00:04:47,639 --> 00:04:51,219
bake skinless chicken. Non-meat
protein options include lentils and

62
00:04:51,219 --> 00:04:56,338
beans. Carbohydrate intake should come from
whole grains, whole fruits and vegetables,

63
00:04:56,338 --> 00:05:00,768
and foods high in fiber. Some examples

include steamed brown basmati rice and

64
00:05:00,768 --> 00:05:05,319
vegetables. Examples of high fiber
carbohydrates include whole grain breads,

65
00:05:05,319 --> 00:05:10,619
legumes and fruit. If you are eating a lot
of fruit with the meal, cut down on rice

66
00:05:10,619 --> 00:05:14,889
and bread so the carbohydrates don't add
up to quickly. Green vegetables are a great

67
00:05:14,889 --> 00:05:20,189
addition to any diet, whether that is green
beans, broccoli, or kale salad. Always drink

68
00:05:20,189 --> 00:05:24,268
lots of water. Hydration is an important
factor in your body functioning properly.

69
00:05:26,718 --> 00:05:30,758
So, let's talk about checking your blood
glucose level at home. Knowing the right

70
00:05:30,758 --> 00:05:34,638
foods to eat is a big part of controlling
diabetes but it is also important to check

71
00:05:34,638 --> 00:05:37,828
your blood glucose so you can know
how different foods are affecting

72
00:05:37,828 --> 00:05:40,138
you. At home, the best method for

73
00:05:40,138 --> 00:05:43,978
blood glucose checks involve giving
yourself a small finger prick and

74

00:05:43,978 --> 00:05:47,758
using a test strip and glucometer, which
collects a small amount of blood and

75
00:05:47,758 --> 00:05:52,178
analyzes it. Some important times to
test your blood glucose are: first thing

76
00:05:52,178 --> 00:05:56,357
in the morning before breakfast. Your blood
glucose should be between seventy and one hundred.

77
00:05:59,869 --> 00:06:03,659
Two hours after a meal, your blood
glucose has risen because of eating

78
00:06:03,659 --> 00:06:05,649
but should still
be less than one hundred and forty.

79
00:06:10,058 --> 00:06:13,468
Also check it during the night if
you have been experiencing:

80
00:06:13,468 --> 00:06:17,748
night sweats, morning headaches,
or unexplained high or low readings.

81
00:06:20,969 --> 00:06:24,999
Remember you should also check your blood
glucose levels if you are unwell or sick

82
00:06:24,999 --> 00:06:30,389
`Sickness usually leads to high blood
glucose levels. You are experiencing

83
00:06:30,389 --> 00:06:34,729
symptoms of high blood glucose levels
such as headaches, vision changes, and

84
00:06:34,729 --> 00:06:38,599
extreme thirst. You suspect that you

might have a low blood glucose level.

85
00:06:38,599 --> 00:06:43,388
Some symptoms of low blood glucose include
sweating, shaking, light headedness, or

86
00:06:43,388 --> 00:06:47,699
fatigue. What do you do when your blood
glucose is too high? Take your medications

87
00:06:47,699 --> 00:06:51,349
as prescribed and be sure not to eat or
drink anything that can make your blood

88
00:06:51,349 --> 00:06:55,899
glucose increase more. What do you do when
your blood glucose is too low? Take some

89
00:06:55,899 --> 00:07:00,768
sugar or a sweet drink immediately, for
example: half a cup of ordinary soft

90
00:07:00,768 --> 00:07:05,219
drink. Low calorie diet drinks do not have
natural sugar in them so they will not

91
00:07:05,219 --> 00:07:10,459
help increase your blood glucose
level. A half glass of fruit juice or

92
00:07:10,459 --> 00:07:15,079
three to five glucose tablets, available
from a pharmacy. Why is it important to

93
00:07:15,079 --> 00:07:19,239
control my diabetes? Uncontrolled diabetes
can lead to other health concerns such

94
00:07:19,239 --> 00:07:22,888
as vision problems, kidney disease,
nerve problems, heart disease, and

95
00:07:22,888 --> 00:07:26,849
more. These are all result of
poor blood supply that occurs

96
00:07:26,849 --> 00:07:31,508
with uncontrolled diabetes, which can
cause damage to your feet, eyes, and

97
00:07:31,508 --> 00:07:35,799
other parts of your body. Take care of your
feet by inspecting them every day for

98
00:07:35,799 --> 00:07:38,688
sores or cuts. Wash them well with soap and

99
00:07:38,688 --> 00:07:42,769
warm water. Moisturize your feet and
wear supportive shoes. Numbness and

100
00:07:42,769 --> 00:07:46,379
tingling in your feet and other
extremities can be a sign of nerve disease.

101
00:07:48,269 --> 00:07:52,659
Exercise is an important aspect of a
healthy lifestyle and it helps lower blood

102
00:07:52,659 --> 00:07:57,888
glucose levels. It also reduces stress and
other risks of heart disease.

103
00:07:57,888 --> 00:08:02,019
Some good exercises to participate in
include running or walking, swimming, and

104
00:08:02,019 --> 00:08:04,988
cycling. It is recommended
that you should exercise for

105
00:08:04,988 --> 00:08:09,848
thirty minutes a day. It is important to

maintain regular check-ups with your doctor.

106
00:08:09,848 --> 00:08:13,439
They will look at your blood
pressure, weight, feet, eyes, and

107
00:08:13,439 --> 00:08:16,449
lab tests to see how well
your diabetes is controlled.

108
00:08:16,449 --> 00:08:20,939
One important blood test your doctor will
look at is called hemoglobin A1c.

109
00:08:20,939 --> 00:08:24,839
It is a test you need to get every three
to six months because it shows your

110
00:08:24,839 --> 00:08:28,979
overall blood glucose control for
the last six to twelve weeks. Remember,

111
00:08:28,979 --> 00:08:32,109
eating right, exercising, and
following the instructions of your health

112
00:08:32,109 --> 00:08:35,609
care provider is the best way to get
the most out of life with diabetes.

1
00:00:04,570 --> 00:00:09,780
मधुमेह क्या है? मधुमेह एक बीमारी है जो शरीर के ग्लूकोज
का उपयोग करने की क्षमता पर असर करता है

2
00:00:09,780 --> 00:00:12,770
यह एक चीनी है जो शरीर का ईंधन का मुख्य स्रोत है

3
00:00:12,770 --> 00:00:17,770
चलने के लिए आपके शरीर को ग्लूकोज की जरूरत है । यहां देखिए
यह कैसे काम करता है । कल्पना कीजिए की यह एक रक्त वाहिका है।

4
00:00:18,410 --> 00:00:23,730
खाने के बाद, भोजन से ग्लूकोज खून में प्रवेश होता है । यह तस्वीर
आपके अग्न्याशय (पैंक्रीयस) का प्रतिनिधित्व करती है ।

5
00:00:23,730 --> 00:00:28,440
यह आपके शरीर का एक अंग है जो इंसुलिन नामक हार्मोन बनाता
है। इंसुलिन एक कुंजी की तरह काम करता है

6
00:00:28,440 --> 00:00:32,789
जो रक्त में ग्लूकोज को शरीर के कोशिकाओं तक पहुँचानेमे मदद
करता है। यह शरीर को आवश्यक ऊर्जा प्रदान करता है।

7
00:00:36,400 --> 00:00:40,821
जब आपके शरीर में मधुमेह होता है,या तो आपका शरीर
इंसुलिन बना नहीं सकता हैं, या

8
00:00:40,821 --> 00:00:45,231
इंसुलिन शरीर में नियमित रूप से काम नहीं करता है। इसका
मतलब है कि ग्लूकोज

9
00:00:45,231 --> 00:00:49,710
कोशिकाओं तक नहीं पहुँच सकता है और इससे रक्त में
बहुत अधिक ग्लूकोज रह जाता है

10
00:00:49,710 --> 00:00:53,861
यदि रक्त में बहुत अधिक ग्लूकोज है, रक्त ग्लूकोज
का स्तर बहुत अधिक हो जाता है

11
00:00:53,861 --> 00:00:56,391
जो लोगों को बीमार बनाता है अगर वे इलाज नहीं करते हैं।

12
00:00:57,571 --> 00:01:00,611
पूरी दुनिया से लोग मधुमेह से निदान किये जाते है।

13
00:01:00,611 --> 00:01:04,510
मधुमेह वाले लोगों को स्वस्थ जीवन जीने के लिए और जटिलताओं
से बचने केलिये, अपने खाने की आदतों को नियमित करने की आवश्यकता है

14
00:01:04,510 --> 00:01:08,841
मधुमेह के प्रमुख लक्षण क्या हैं?

15
00:01:08,841 --> 00:01:13,481
बहुत पानी पीने के बावजूद प्यास लगना । बहुत ज़्यादा भूख
लगना, इससे कोई फर्क नहीं पड़ता कि आप क्या खाते हैं।

16
00:01:13,481 --> 00:01:15,151
और सामान्य से ज्यादा पेशाब करना ।

17
00:01:21,921 --> 00:01:25,450
तो, चलिए मधुमेह से पीड़ित लोगों को किस तरह के खाद्य
पदार्थ खाना चाहिए, बात करते है

18
00:01:25,450 --> 00:01:29,520
संयम में क्या खाना अच्छा है, और किस तरह के भोजन
से बचने की आवश्यकता है।

19
00:01:29,520 --> 00:01:32,471

मधुमेह आहार, कार्बोहाइड्रेट और वसा सीमित रखने पर केंद्रित है ।

20
00:01:32,471 --> 00:01:37,221
जो ज्यादातर लोगों के लिए खाने का एक स्वस्थ तरीका है।
यह स्वस्थ खाद्य पदार्थों की कुछ तस्वीरें हैं।

21
00:01:42,738 --> 00:01:47,108
कार्बोहाइड्रेट, भोजन की एक कक्षा है जिसमें माँडी(स्टार्च)
और शर्करा है, और

22
00:01:47,108 --> 00:01:51,419
जिसे सरल या जटिल कहा जा सकता है। विशेष रूप
से सरल कार्बोहाइड्रेट

23
00:01:51,419 --> 00:01:55,889
अतिरिक्त होने पर आपके रक्त ग्लूकोज स्तर ऊपर जा
सकता है और वसा की अत्यधिक स्सेवन से

24
00:01:55,889 --> 00:02:00,299
दिल की बीमारी जैसे दीर्घकालिक समस्याओं का कारण
बन सकता है । यह कुछ खाद्य पदार्थ हैं जिसमें

25
00:02:00,299 --> 00:02:05,098
सरल कार्बोहाइड्रेट बहुत अधिक है । इन खाद्य पदार्थों को
हम तीन श्रेणियों में अलग कर सकते हैं: हरा

26
00:02:05,098 --> 00:02:09,439
पीला, और लाल । हरा मतलब अच्छा खाना है जिनका
आनंद आप हर समय ले सकते हैं, पीले रंग

27
00:02:09,439 --> 00:02:13,869
का मतलब है कि उन खाद्य पदार्थों को संयम से खाना
चाहिए । और लाल का मतलब है की उन खाद्य पधार्थों

28

00:02:13,869 --> 00:02:18,759
को कम बार खाना चाहिए। हरे रंग के खाद्य पदार्थ के कुछ
उदाहरण या खाद्य पदार्थों जिनका मैं हमेशा सेवन कर सकता हूं वह है

29
00:02:18,759 --> 00:02:23,789
उबले हुए सब्जियां, दुबला मांस जैसे मछली, चिकन,
या भेड़ का बच्चा और कम वसा दही या दूध।

30
00:02:25,199 --> 00:02:26,969
कटा हुआ गोभी, ब्रोकोली, या

31
00:02:26,969 --> 00:02:32,199
फूलगोभी भी स्वस्थ भोजन है और सफ़ेद चावल से बहत है।
गोभी आसानी से खराब भी नहीं होता है और

32
00:02:32,199 --> 00:02:37,239
स्टू या करी के साथ खाया जा सकता है। सबजी करी, हरी
सलाद और हम्मस, और ग्रील्ड बैंगन

33
00:02:38,388 --> 00:02:40,719
सुमाक एओली के साथ स्वस्थ विकल्प हैं।

34
00:02:42,109 --> 00:02:47,099
कभी-कभी खाने के लिए किस प्रकार के भोजन ठीक होते हैं
या छोटे भागों में? कुछ पीले खाद्य पदार्थ

35
00:02:47,099 --> 00:02:51,968
अखरोट, पूरे अनाज सहित ब्रेड, जैतून का तेल, जैतून, और बीज

36
00:02:51,968 --> 00:02:56,139
पीले खाद्य पदार्थों के लिए कुछ उपयोगी युक्तियाँ है, पूरे अनाज
की रोटी चुनना और

37
00:02:56,139 --> 00:03:01,199
छोटे हिस्से में खाना। उदाहरण के लिए, गेहूं के रोटी, सफेद

नान से बहतर

38
00:03:01,199 --> 00:03:05,799
स्वस्थ विकल्प है। लाल श्रेणी में किस प्रकार के खाद्य पदार्थ हैं?

39
00:03:05,799 --> 00:03:10,409
भोजन जिस में साधारण कार्बोहाइड्रेट उच्च हैं, वह है सफेद
आलू, सफेद चावल, सफेद आटा से बनी रोटी

40
00:03:10,409 --> 00:03:14,879
अधिकांश फलों के रस, अन्य चीनी नियमित सोडा जैसे पेय
पदार्थ, और

41
00:03:14,879 --> 00:03:20,349
भारी चाशनी में डिब्बाबंद फल। यह सभी आपकी रक्त शर्करा
को बढा देती है । फल और

42
00:03:20,349 --> 00:03:23,309
फलों के रस मुश्किल/छली हो सकते हैं। हालांकि कुछ रस और

43
00:03:23,309 --> 00:03:27,498
फलों में कोई चीनी नहीं जोड़ा जाता है, उनमें प्राकृतिक
शर्करा होते हैं जिसके कारण

44
00:03:27,498 --> 00:03:32,998
आपका रक्त शर्करा बढ़ जाता है। उच्च वसा सहित खाद्य पदार्थ
है तेल, तला हुआ भोजन, घी, मलाई सहित दूध

45
00:03:32,998 --> 00:03:38,208
और मकई। उगाली जैसे भोजन से बचना चाहिए, यह
गढ़ा मक्की के आटे से बनाया जाता हैं और

46
00:03:38,208 --> 00:03:42,319
सरल कार्बोहाइड्रेट और वसा में उच्च है । मुफ्त भोजन

का मतलब क्या है?

47
00:03:42,319 --> 00:03:45,869
कुछ खाद्य पदार्थ और पेय के सेवन से आपके रक्त ग्लूकोज
स्तर प्रभावित नहीं होता है ।

48
00:03:45,869 --> 00:03:50,299
इन्हें मुफ्त भोजन कहा जाता है, जिसका मतलब है आप जितना
चाहें उतना इनका सेवन कर सकते है
49
00:03:50,299 --> 00:03:54,198
मुफ्त भोजन कोई भी खाद्य पदार्थ है जिनके सेवन से शरीर
को बीस कैलोरी से कम ऊर्जा मिलता है ।

50
00:03:55,358 --> 00:04:00,758
नि: शुल्क पेय के उदाहरण हैं: बिना शक्कर की चाय,
काली कॉफी, स्पष्ट सूप जैसे उपभोग,

51
00:04:00,758 --> 00:04:06,498
और आहार शीतल पेय। मुक्त सब्जियां है शतावरी,
लहसुन

52
00:04:06,498 --> 00:04:11,719
लीक, कैप्सिकम, प्याज, मिर्च, बैंगन, सौंफ़

53
00:04:11,719 --> 00:04:16,649
और उबचिनी। मुक्त खाद्य पदार्थ के और उदाहरण
है जड़ी बूटियों और

54
00:04:16,649 --> 00:04:22,289
मसाले, कम कैलोरी जाम, कम कैलोरी सलाद ड्रेसिंग,
सभी किस्मों के सिरका, और

55
00:04:22,289 --> 00:04:24,039
कृत्रिम मिठास

56
00:04:24,039 --> 00:04:27,569
यह सब ध्यान में रखते हुए, एक अच्छी तरह संतुलित भोजन,
और खाने की क्या योजना होनी चाहिए?

57
00:04:28,749 --> 00:04:33,419
भोजन के लिए नियमित कार्यक्रम रखे । जितना हो सके,
हर दिन एक ही समय पर खाना खाये

58
00:04:33,419 --> 00:04:37,649
प्रत्येक भोजन में एक समान प्रोटीन की मात्रा, कार्बोहाइड्रेट,
और वसा होना चाहिए।

59
00:04:37,649 --> 00:04:42,729
खाने में प्रोटीन की मात्रा दस से बीस प्रतिशत होनी चाहिए।

60
00:04:42,729 --> 00:04:47,639
कुछ स्वस्थ प्रोटीन में यह सब शामिल है, सेका गया
मछली, दुबला बकरी का मास, और

61
00:04:47,639 --> 00:04:51,219
सेका हुआ त्वचा रहित चिकन। शाख़हरी प्रोटीन विकल्पों के
उदाहरण है दाल और फलियां (बीन्स)

62
00:04:51,219 --> 00:04:56,338
खाने में कार्बोहाइड्रेट, पूरे अनाज, पूरे फल, सब्जियां और

63
00:04:56,338 --> 00:05:00,768
रेशा(फाइबर) में उच्च भोजन से आना चाहिए।कुछ उदाहरण
है उबले हुए भूरा बासमती चावल और सब्ज़ियाँ।

64
00:05:00,768 --> 00:05:05,319
उच्च रेशा (फाइबर) कार्बोहाइड्रेट के उदाहरण है पूरे अनाज की रोटी,

65

00:05:05,319 --> 00:05:10,619
फलियां और फल। यदि आप भोजन के साथ बहुत सारा फल खा रहे हैं तो चावल और

66
00:05:10,619 --> 00:05:14,889
रोटी पर कटौती करे, ताकि कार्बोहाइड्रेट की गिनती सीमित रहे। हरी सब्जियां बहुत अच्छी मेल हैं

67
00:05:14,889 --> 00:05:20,189
किसी भी आहार में, चाहे वह हरा सेम हो, ब्रोकोली हो, या केल (हरे पत्ते) सलाद। हमेशा

68
00:05:20,189 --> 00:05:24,268
ढेर सारा पानी पीए। आपका शरीर अच्छी तरह से काम करे, इसकेलिए जलयोजन एक महत्वपूर्ण कारक है।

69
00:05:26,718 --> 00:05:30,758
तो, चलिए घर पर अपने खून में ग्लूकोज स्तर की जांच करने के बारे में बात करते हैं। सही खाद्य पधार्थ

70
00:05:30,758 --> 00:05:34,638
सेवन करना मधुमेह के नियंत्रण का एक बड़ा हिस्सा है, लेकिन रक्त ग्लूकोज स्तर जांचना भी महत्वपूर्ण है

71
00:05:34,638 --> 00:05:37,828
ताकि आप जान सकते हैं कि कैसे अलग खाद्य पदार्थ आपको प्रभावित कर रहे हैं

72
00:05:37,828 --> 00:05:40,138
घर पर, रक्त ग्लूकोज की जांच के लिए सबसे मुख्य विधि

73
00:05:40,138 --> 00:05:43,978
में शामिल है खुद को उंगली पे एक छोटी चुभन और

74
00:05:43,978 --> 00:05:47,758

एक परीक्षण पट्टी और ग्लूकोमीटर का उपयोग करके,
रक्त की थोड़ी मात्रा एकत्र करके

75
00:05:47,758 --> 00:05:52,178
इसका विश्लेषण करना। अपने रक्त ग्लूकोज का परीक्षण
करने के कुछ महत्वपूर्ण समय है:

76
00:05:52,178 --> 00:05:56,357
नाश्ते से पहले सुबह में सबसे पहली जाँच। आपका खून ग्लूकोज
स्थर सत्तर(७०) और सौ(१००) के बीच होनी चाहिए

77
00:05:59,869 --> 00:06:03,659
भोजन के दो घंटे बाद, आपके खून में ग्लूकोज बढ़ती है
खाना खाने के कारण
78
00:06:03,659 --> 00:06:05,649
लेकिन अभी भी गिनती एक सौ चालीस(१४०) से कम होना
चाहिए ।

79
00:06:10,058 --> 00:06:13,468
रात के दोहरान भी इसे जांचें अगर आप यह अनुभव कर रहे हैं:

80
00:06:13,468 --> 00:06:17,748
रात में पसीना, सुबह में सिरदर्द, या अस्पष्ट उच्च या
निम्न रीडिंग्स

81
00:06:20,969 --> 00:06:24,999
याद रखें, कि आप अगर अस्वस्थ हैं या बीमार हैं तो आपको
अपना खून ग्लूकोज का स्तर जँचते रहना चाहिए

82
00:06:24,999 --> 00:06:30,389
बीमारी आमतौर पर रक्त ग्लूकोज के स्तर को उच्च करती
है। आप

83
00:06:30,389 --> 00:06:34,729

उच्च रक्त ग्लूकोज के स्तर के लक्षण अनुभव कर सकते है जैसे सिरदर्द, दृष्टि में परिवर्तन, और

84
00:06:34,729 --> 00:06:38,599
चरम प्यास। आपको संदेह हो सकता है कि आपका रक्त ग्लूकोज स्तर कम है

85
00:06:38,599 --> 00:06:43,388
कम रक्त ग्लूकोज के कुछ लक्षणों में शामिल हैं पसीना होना, हिलना, चक्कर, या

86
00:06:43,388 --> 00:06:47,699
थकान। जब आपका ख़ून ग्लूकोज स्थर बहुत अधिक है, तो आप क्या करते हैं? अपनी निर्धारित दवाइयाँ लें

87
00:06:47,699 --> 00:06:51,349
और ध्यान रखे कि आप ऐसा कुछ नहीं खाये या पीये जिससे आपके खून ग्लूकोस स्थर

88
00:06:51,349 --> 00:06:55,899
और बढ़जाए । जब आपका रक्त ग्लूकोज बहुत कम हो जता है तो आप क्या करते हो?

89
00:06:55,899 --> 00:07:00,768
इसके लिए तत्काल कुछ चीनी या मीठा पेय लें उदाहरण: आधा कप शीतल पेय (सॉफ़्ट ड्रिंक)

90
00:07:00,768 --> 00:07:05,219
कम कैलोरी आहार पेय में प्राकृतिक चीनी नहीं है इसीलिए वे

91
00:07:05,219 --> 00:07:10,459
आपके रक्त ग्लूकोज स्तर को बढ़ाने में मदत नहीं करेंगे । फलों के रस का आधा गिलास या

92

00:07:10,459 --> 00:07:15,079
फार्मेसी से उपलब्ध तीन से पांच ग्लूकोज टैबलेट मदत करेंगे ।
मधुमेह को नियंत्रित रखना

93
00:07:15,079 --> 00:07:19,239
क्यों महत्वपूर्ण है? अनियंत्रित मधुमेह अन्य स्वास्थ्य चिंताओं
का कारण बन सकता है जैसे की

94
00:07:19,239 --> 00:07:22,888
दृष्टि की समस्याएं, गुर्दे की बीमारी, नस की समस्याएं, हृदय
रोग, और इत्यादि

95
00:07:22,888 --> 00:07:26,849
ये सभी खराब रक्त आपूर्ति के परिणाम हैं, जो

96
00:07:26,849 --> 00:07:31,508
अनियंत्रित मधुमेह के वजह से होता है, जो आपके पैरों को,
आंखों को एवं आपके शरीर के अन्य हिस्सों को
97
00:07:31,508 --> 00:07:35,799
नुकसान पहुंचाता हैं। अपने पैरों का ख़ास ख्याल रखना
चाहिए, उन्हें हर दिन घाव या कटौती

98
00:07:35,799 --> 00:07:38,688
केलिये निरीक्षण करे । उन्हें साबुन और गरम पानी से
अच्छी तरह से धो लें

99
00:07:38,688 --> 00:07:42,769
अपने पैरों को मॉइस्चराइज करें और सहायक जूते
पहनें।सुन्न होना और

100
00:07:42,769 --> 00:07:46,379
झुनझुनी पैरों में एवं दूसरे चरम में होना नस के रोग
का संकेत हो सकता है।

101

00:07:48,269 --> 00:07:52,659
व्यायाम स्वस्थ जीवन के लिए बहुत ही महत्वपूर्ण पहलू है ।
यह रक्त ग्लूकोस को कम करने में मदद करता है

102
00:07:52,659 --> 00:07:57,888
यह तनाव को भी कम करता है और दिल की बीमारी और
अन्य जोखिम को भी

103
00:07:57,888 --> 00:08:02,019
कुछ अच्छे अभ्यास जिसमें भाग लेना सेहत के लिए अच्छा रहेगा
वह है दौड ना या चलना, तैराकी करना, और

104
00:08:02,019 --> 00:08:04,988
साइकिल चलाना। इसकी सलाह दी जाती है कि आप को प्रति
दिन तीस (३०) मिनट के लिए

105
00:08:04,988 --> 00:08:09,848
व्यायाम करना चाहिए । यह जरुरी है कि अपने डॉक्टर के साथ
नियमित जांच-पड़ताल बनाए रखें

106
00:08:09,848 --> 00:08:13,439
वे आपके रक्त दबाव को देखेंगे, वजन, पैर,
आंखें, और

107
00:08:13,439 --> 00:08:16,449
योगशाला परीक्षण करेंगे जिससे आपका मधुमेह का
नियंत्रण का पता लगा सकते है।

108
00:08:16,449 --> 00:08:20,939
आपके डॉक्टर एक महत्वपूर्ण रक्त परीक्षण करेंगे जिसे हीमोग्लोबिन
ए 1 सी (A १ C) कहा जाता है

109
00:08:20,939 --> 00:08:24,839
यह एक परीक्षण है जिसे आपको हर तीन से छह महीने में प्राप्त
करना चाहिए, क्योंकि यह आपको

110
00:08:24,839 --> 00:08:28,979
पिछले छः से बारह सप्ताह का कुल रक्त ग्लूकोज नियंत्रण
दिखता है

111
00:08:28,979 --> 00:08:32,109
याद रखें, सही खाना, व्यायाम करना, और आपके स्वास्थ्य देखभाल
प्रदाता के निर्देशों का पालन करना

112
00:08:32,109 --> 00:08:35,609
मधुमेह के साथ जीवन से अधिक लाभ उठाने का सबसे अच्छा
तरीका है

00:00:09780 <--00:00:04570
ما هو مرض السكري ؟ داء السكري مرض
هو مرض يؤثر علي كيفيه استخدام الجسم للسكر ،

2
00:00:12770 <--00:00:09780
السكر هو مصدر الجسم الرئيسي للوقود.

3
00:00:17770 <--00:00:12770
جسمك يحتاج السكر ليستمر بالعَمَل
هذه كيفية عمله . تخيل ان هذه الأوعية الدموية

4
00:00:23730 <--00:00:18410
بعد تناولك الطعام ، السكر من الغذاء يدخل
دمك. هذه الصورة تمثل البنكرياس ،

5
00:00:28440 <--00:00:23730
وهو عضو في الجسم يصنع هرمون
الانسولين. الانسولين يعمل كمفتاح

6
00:00:32789 <--00:00:28440
لمساعدة سكر الدم في دخول خلايا لجسم.
وهذا يسمح للجسم للحصول علي الطاقة التي يحتاجها.

7
00:00:40821 <--00:00:٣٦
عندما تكون مصاب بمرض السكري ،
اما ان لا يستطيع جسمك بصنع الانسولين أو

8
00:00:45231 <--00:00:40821
ان الانسولين لا يعمل في جسمك مثل ما
يجب ان يعمل. هذا يعني ان السكر لا يستطيع دخول

9
00:00:49710 <--00:00:45231
الخلايا بشكل طبيعي وهذا يسبب وجود
السكر الكثير في الدم.

10
00:00:53861 <--00:00:49710
إذا كان الكثير من السكر موجود في الدم ،
مستوي سكر الدم يرتفع جدا

11

00:00:56391 <--00:00:53861
مما يجعل الناس مرضين إذا
انهم لا يحصلون على العلاج.

12
00:01:00611 <--00:00:57571
هنالك أشخاص من جميع انحاء العالم
يتم تشخيصهم بمرض السكري.

13
00:01:04510 <--00:01:00611
الأشخاص الذين يعانون من مرض السكري يحتاجون إلى مراقبة
عادات الأكل لعيش حياة صحية و

14
00:01:08841 <--00:01:04510
تجنب أي مضاعفات. ما هي الأعراض الرئيسية
لمرض السكري ؟

15
00:01:13481 <--00:01:08841
العطش الشديد رغم شرب الكثير من الماء.
جائع جدا بغض النظر عن ما تاكله.

16
00:01:15151 <--00:01:13481
والتبول أكثر من المعتاد

17
00:01:25450 <--00:01:21921
لذلك ، دعونا نتحدث عن أي نوع من
الاطعمه يجب ان يأكلها المصابون بمرض السكري ،

18
00:01:29520 <--00:01:25450
ما الفائده من الأعتدال ، و
ما هي أنواع الطعام التي يجب تجنبها.

19
00:01:32471 <--00:01:29520
النظام الغذائي لمرضى السكري يركز
على الكربوهيدرات والدهون المحدودة ،

20
00:01:37221 <--00:01:32471
وهي وسيله صحية لمعظم
.الناس. هذه بعض الصور من الاطعمه الصحية.

21
00:01:47108 <--00:01:42738

الكربوهيدرات هي فئة من المواد الغذائية التي
تحتوي علي النشويات والسكريات ، و

22
00:01:51419 <--00:01:47108
يمكن تسميتها بالبسيطه أو
المعقده. الكربوهيدرات البسيطة تسبب بشكل خاص

23
00:01:55889 <--00:01:51419
نسبة سكر الدم بالأرتفاع
وأكل الدهون بشكل مفرط

24
00:02:00299 <--00:01:55889
يؤدي إلى مشاكل على المدى الطويل مثل مرض القلب
. هذه بعض الاطعمه التي تحتوي على نسبه عاليه

25
00:02:05098 <--00:02:00299
من الكربوهيدرات البسيطة. يمكننا فصل
هذه الاطعمه إلى ثلاث فئات: الأخضر ،

26
00:02:09439 <--00:02:05098
الأصفر ، والأحمر. الأخضر يعني الاطعمه الجيدة
التي يمكنك التمتع بها دائما ، الأصفر

27
00:02:13869 <--00:02:09439
يعني ان هذه الاطعمه يجب ان تؤكل في
الاعتدال ، والأحمر يعني ان تلك الاطعمه

28
00:02:18759 <--00:02:13869
ينبغي ان تؤكل نادراً من الأحيان. بعض الامثله
من الأطعمة الخضراء أو الأطعمة التي يمكن ان تأكل دائما

29
00:02:23789 <--00:02:18759
هي الخضروات المسلوقه ، اللحوم الخاليه من الدهن
مثل السمك ، الدجاج ، أو لحم الخروف و اللبن او الحليب المنخفض من الدهون.

30
00:02:26969 <--00:02:25199
الملفوف المقطع ، البروكلي ، أو

31
00:02:32199 <--00:02:26969
القرنبيط هو أيضا غذاء صحي للأكل بدلا من

الأرز الأبيض. الملفوف لا يفسد بسهوله و

32
00:02:32199 --> 00:02:37239
يمكن ان يُطبخ بالحساء أو الكاري. الخضروات مع
الكاري ، السلطة الخضراء والحمص ، والباذنجان المشوي

33
00:02:38388 --> 00:02:40719
مع السماق الأيولي هي كلها خيارات صحية.

34
00:02:42109 --> 00:02:47099
اي نوع من الاطعمه يمكن أكلها في بعض الأحيان
أو في أجزاء صغيره ؟ بعض الاطعمه الصفراء

35
00:02:47099 --> 00:02:51968
تشمل المكسرات ، و الخبز ذات الحبوب الكاملة
وزيت الزيتون والزيتون والبذور.

36
00:02:51968 --> 00:02:56139
بعض النصائح المفيدة للأغذيه الصفراء
هو اختيار الخبز ذات الحبوب الكامله و

37
00:02:56139 --> 00:03:01199
أكل بحجم صغير.
على سبيل المثال ، يمكن أستخدام خبز الجباتي ذات الحبوب الكامله

38
00:03:01199 --> 00:03:05799
بدلا عن الخبز الأبيض كبديل صحي. يعني
أي نوع من الاطعمه تكون في الفئة الحمراء ؟

39
00:03:05799 --> 00:03:10409
الاطعمه العالية في الكربوهيدرات البسيطة تشمل
البطاطا البيضاء ، الأرز الأبيض ، الطحين الأبيض

40
00:03:10409 --> 00:03:14879
الخبز ، ومعظم عصائر الفاكهة ، وغيرها من المشروبات المُحلية
مثل المشروبات الغازيه العادية ، و

41
00:03:14879 --> 00:03:20349
الفاكهة المعلبة في شرابت مركزه. كل هذه
الأطعمه تجعل سكر دمك يرتفع. الفاكهة و

42
00:03:23309 <--00:03:20349
عصائر الفاكهة يمكن ان تكون خادعه.
على الرغم من كون بعض العصائر و

43
00:03:27498 <--00:03:23309
الفواكه التي لا تحتوي على سكرأضافي ، فأنها لا تزال
تحتوي على السكريات الطبيعية التي يمكن ان تسبب

44
00:03:32998 <--00:03:27498
سكر دمك بالأرتفاع. الاطعمه العالية في
الدهون تشمل الزيوت ، الاطعمه المقلية ، السمن ، الحليب

45
00:03:38208 <--00:03:32998
كامل الدسم ، والذرة. ويعتبر رز الأوغالي الافريقي غذاء
يجب تجنبه. ويتكون من الذرة السميكه و

46
00:03:42319 <--00:03:38208
عاليه في الكربوهيدرات البسيطة و
الدهون. ماذا يعني الطعام المجاني ؟

47
00:03:45869 <--00:03:42319
يمكن اتخاذ بعض الاطعمه والمشروبات دون
تؤثر علي مستوي السكر في الدم.

48
00:03:50299 <--00:03:45869
هذه الاطعمه تسمي الاطعمه المجانيه ، مما يعني انك
تستطيع أكلها بقدر ما تريد.

49
00:03:54198 <--00:03:50299
الاطعمه المجانية هي الاطعمه التي فيها اقل
من عشرين سعره حراريه لكل وجبه.

50
00:04:00758 <--00:03:55358
تشمل المشروبات المجانية: الشاي الغير محلي ،
القهوة السوداء ، والأحسئه الشفافه مثل الكنسوميه ،

51
00:04:06498 <--00:04:00758
والمشروبات الغازيه بدون سكر. الخضروات
المجانيه هي الهليون ، الثوم ،

52
00:04:11719 <--00:04:06498
الكراث ، الفلفل ، البصل ،
الفلفل الحار ، الباذنجان ، الشمار ،

53
00:04:16649 <--00:04:11719
والكوسة. بعض الأغذيه الأخرى التي هي أيضا
تعتبر الاطعمه المجانيه هي الأعشاب و

54
00:04:22289 <--00:04:16649
التوابل والمربيات وصلصة السلطة ذواتي السعرات الحرارية المنخفضة
،و جميع أصناف الخل ، و

55
00:04:24039 <--00:04:22289
المحليات السكريه الاصطناعية.

56
00:04:27569 <--00:04:24039
مع كل هذا في الاعتبار ، كيف يكون شكل الوجبه المتوازنه
و نظام الصحي للطعام اليومي ؟

57
00:04:33419 <--00:04:28749
التزام بجدول منتظم للوجبات.
أكل نفس الوقت كل يوم بقدر

58
00:04:37649 <--00:04:33419
الأستطاع. وينبغي ان يكون في كل وجبه
كميه مماثله من البروتين ، والكربوهيدرات ، و

59
00:04:42729 <--00:04:37649
الدهون. وينبغي تناول البروتين
بنسبه تشكل عشره إلى عشرين

60
00:04:47639 <--00:04:42729
في المئة من النظام الغذائي الخاص بك. بعض البروتينات الصحيه
تشمل الأسماك المحمصه ، ولحم الغنم العجاف ، و

61
00:04:51219 <--00:04:47639
الدجاج المحمص عديم الجلد. البروتينات النباتيه
تشمل العدس و

62
00:04:56338 <--00:04:51219
الفاصوليا. يجب ان ياتي مدخول الكربوهيدرات من
الحبوب كلها، الفواكه والخضروات ،

63
00:05:00768 <--00:04:56338
والاطعمه العاليه في الألياف. بعض الامثله
تشمل الأرز البني البسمتي المغلي و

64
00:05:05319 <--00:05:00768
الخضروات. أمثله عن ألألياف العالية
بالكربوهيدرات تشمل الخبز ذات الحبوب الكاملة ،

65
00:05:10619 <--00:05:05319
البقوليات والفاكهة. إذا كنت تأكل الكثير
من الفاكهة مع وجباتك ، خفض من نسبة الأرز

66
00:05:14889 <--00:05:10619
والخبز حتى الكربوهيدرات لا تتظاعف
بسرعة. الخضار الخضراء هي جيده

67
00:05:20189 <--00:05:14889
للاضافه إلى اي نظام غذائي ، سواء كانت الفاصوليا الأخضراء
، البروكلي ، أو سلطه الكرنب. اشرب دائما

68
00:05:24268 <--00:05:20189
الكثير من الماء. ترطيب الجسم عامل مهم
ليعمل جسمك بشكل صحيح.

69
00:05:30758 <--00:05:26718
أذا ، دعونا نتحدث عن فحص مستوى السكر في دمك
عندما تكون في المنزل. معرفة الاطعمه

70
00:05:34638 <--00:05:30758
الصحيحه للأكل هو جزء كبير من السيطرة
على مرض السكري ولكن من المهم أيضا التحقق

71
00:05:37828 <--00:05:34638
من السكر في دمك حتى تتمكن من معرفة
تأثير الاطعمه المختلفة

72
00:05:40138 <--00:05:37828
. عليك. وأفضل طريقه على

73
00:05:43978 <--00:05:40138
فحص السكر في الدم هو وخز
اصبعك بوخزه صغيرة

74
00:05:47758 <--00:05:43978
باستخدام شريط اختبار ومقياس السكر ، وهو
يجمع كميه صغيره من الدم و

75
00:05:52178 <--00:05:47758
يحلل ذلك. بعض الأوقات الهامه التي
يمكن اختبار السكر في الدم الخاص بك هي: أول شيء

76
00:05:56357 <--00:05:52178
في الصباح قبل الإفطار. ينبغي
ان يكون مستوى السكر بدمك بين السبعين 70 والمائه 100 .

77
00:06:03659 <--00:05:59869
بعد ساعتين من تناول الطعام يكون دمك
قد ارتفع السكر به بسبب الأكل

78
00:06:05649 <--00:06:03659
ولكن ينبغي ان لا يزال
اقل من المائه و أربعون 140.

79
00:06:13468 <--00:06:10058
يمكنك أيضا التحقق من ذلك خلال الليل إذا
كنت قد شهدت:

80
00:06:17748 <--00:06:13468
تعرق ليلي ، صداع صباحي
أو النتائج العالية أو المنخفضة الغير المفسرة.

81
00:06:24999 <--00:06:20969
تذكر يجب ان تتحقق من نسبة السكر بدمك
إذا كنت مريض او لست على ما يرام

82
00:06:30389 <--00:06:24999
المرض يؤدي عاده إلى ارتفاع مستوى السكر
بالدم . أذا كنت تعاني

83
00:06:34729 <--00:06:30389
من أعراض ارتفاع مستويات السكر في الدم
مثل الصداع ، وتغيرات في الرؤية ، و

84
00:06:38599 <--00:06:34729
العطش الشديد. أدا يمكنك بالشك بان
قد يكون مستوي السكر في دمك منخفض.

85
00:06:43388 <--00:06:38599
بعض اعراض انخفاض السكر في الدم تشمل
التعرق ، والأرتجاف ، الدوار ، أو

86
00:06:47699 <--00:06:43388
التعب. ماذا تفعل عندما يكون سكر دمك
مرتفع جدا ؟ قم بأخذ أدويتك

87
00:06:51349 <--00:06:47699
كما هو مقرر من طبيبك وتأكد من عدم تناول الطعام أو
شرب اي شيء يمكن ان يجعل سكر دمك

88
00:06:55899 <--00:06:51349
يزداد أكثر. ماذا تفعل عندما
سكر الدم منخفض جدا ؟ تناول بعض

89
00:07:00768 <--00:06:55899
السكر أو شراب حلو على الفور ، عل سبيل
المثال: نصف كوب من أي مشروب غازي

90
00:07:05219 <--00:07:00768
المشروبات التي تحتوي على سعره حراريه منخفضة لا تحتوي
على سكر طبيعي في مكوناتها لذلك انها لن

91
00:07:10459 <--00:07:05219
تساعد في زيادة نسبة السكر في الدم.
يمكنك شرب نصف كوب من عصير الفاكهة أو

92
00:07:15079 <--00:07:10459
أخذ ثلاثه إلى خمسه أقراص من السكر ، المتاحة
في الصيدليات. لماذا هو مهم أن

93
00:07:19239 <--00:07:15079
أسيطر على مرض السكري ببدني؟ أذا كان السكرغير منضبط
يمكن ان يؤدي إلى شواغل صحية أخرى مثل

94
00:07:22888 <--00:07:19239
مشاكل الرؤية ، وامراض الكلى ،
مشاكل الأعصاب ، وامراض القلب ، و

95
00:07:26849 <--00:07:22888
الكثير من الامراض الاخرى. وهذه كلها نتيجة
سوء إمدادات الدم التي تحدث

96
00:07:31508 <--00:07:26849
مع مرض السكري الغير منضبط ، والتي يمكن ان
تسبب الضرر لقدميك ، والعينين ، و

97
00:07:35799 <--00:07:31508
أجزاء أخرى من جسمك. اعتني
بأقدامك من خلال النظر اليهم يوميا

98
00:07:38688 <--00:07:35799
للأنتباى الى أي قروح أو جروح. أغسلهم جيدا مع الصابون و

99
00:07:42769 <--00:07:38688
الماء الدافئ و ترطيب قدميك بالدهن و
ارتداء احذيه داعمه. أذا شعرت بالخدر

100
00:07:46379 <--00:07:42769
وخز في قدميك وغيرها
من الأطراف يمكن ان تكون علامة بتسبب مرض ألاعصاب.

101
00:07:52659 <--00:07:48269
التمرين هو جانب مهم من جوانب
نمط الحياة الصحية ويساعد على خفض الدم

102

00:07:57888 <--00:07:52659
مستويات السكر. كما انه يقلل من الإجهاد و
مخاطر أخرى من امراض القلب.

103
00:08:02019 <--00:07:57888
بعض التمارين الجيدة التي يمكن القيام بيها
تشمل الركض أو المشي ، السباحة ، و

104
00:08:04988 <--00:08:02019
ركوب الدراجات. وينصح
بممارسة التمارين الرياضيه

105
00:08:09848 <--00:08:04988
لثلاثون دقيقه في اليوم. ومن المهم أن
تحافظ على الفحوصات المنتظمة مع طبيبك.

106
00:08:13439 <--00:08:09848
سوف ينظرون إلى ضغط دمك
ووزنك ، وقدميك ، وعينيك ، و

107
(:00:08 <--00:08:13439
يقومون بفحص دمك لمعرفه مستوى تحسن
التحكم في مرضك بالسكري.

108
00:08:20939 <--(:00:08
من التحاليل المهمه التي من الممكن أن ينظر أليها طبيبك
هو تحليل الهيموكلوبين A1c.

109
00:08:24839 <--00:08:20939
وهو تحليل تحتاج إلى الحصول عليه كل ما بين ثلاث
ألى سته أشهر لأنه يظهر

110
00:08:28979 <--00:08:24839
السيطرة الشاملة على سكر دمك في
آخر سته إلى اثني عشر أسبوعا. تذكر

111
00:08:32109 <--00:08:28979
الأكل بشكل صحي ، وممارسة الرياضه، و
اتباع تعليمات طبيبك

112

00:08:35609 <--00:08:32109
هو أفضل وسيله للحصول على
حياة أفضل بالرغم من مرض السكري.

Appendix C

Demographic Survey

1. Age in years
    - _____
2. Gender
    - Female
    - Male
3. Region of birth
    - Africa
    - North or South America
    - Asia
    - Middle East
    - Europe
    - Other
4. Years lived in the United States
    - _____
5. Country of origin _____
6. Primary language
    - Arabic
    - Hindi
    - English
7. Highest education level
    - Less than high school
    - High school graduate
    - Some college
    - College graduate
    - Graduate degree
8. Who prepares most of the meals that you eat?
    - I prepare most of the meals
    - My spouse prepares most of the meals
    - Another family member or friend prepares most of the meals
    - I eat most of my meals at restaurants

जनसांख्यिकीय सर्वेक्षण

1. आयु वर्षों में _____
2. लिंग
    - महिला
    - पुरुष
3. जन्म क्षेत्र
    - अफ्रीका
    - उत्तर या दक्षिण अमेरिका
    - एशिया
    - मध्य पूर्व देश
    - यूरोप
    - अन्य
4. जन्म देश _____
5. अमेरिका में कितने साल रहे हेे _____
6. मुख्य/प्रथम भाषा
    - अरबी
    - हिंदी
    - अंग्रेज़ी
7. उच्चतम शैक्षिक स्तर
    - हाई स्कूल से कम
    - उच्च विद्यालय के स्नातक
    - कॉलेज
    - कॉलेज स्नातक
    - स्नातक उपाधि
8. आपका अधिकांश भोजन कौन तैयार करते हैं?
    - मैं खुद
    - मेरे पति या पत्नी
    - एक और परिवार का सदस्य या दोस्त
    - अधिकांश भोजन मैं घर के बाहार कारता/ति हू

الاستبيان الديموغرافي

1. العمر ____

2. الجنس
   - أنثى
   - ذكر

3. منطقه الولادة
   - افريقيا
   - أمريكا الشمالية أو الجنوبية
   - اسيا
   - الشرق الأوسط
   - أوروبا
   - مكان أخر

4. بلد الولادة_____

5. عدد السنين التي عشت بها في الولايات المتحدة _____

6. اللغة الاساسيه
   - العربية
   - الهنديه
   - الإنكليزية

7. اعلي مستوي تعليمي
   - اقل من المدرسة الثانوية
   - خريج المدرسة الثانوية
   - بعض من سنوات الكليه
   - خريج جامعي
   - شهادة الدراسات العليا

8. من يعد معظم الوجبات التي تاكلها ؟
   - انا اعد معظم الوجبات
   - زوجي او زوجتي يعد أو تعد معظم الوجبات
   - فرد آخر من افراد الاسره أو صديق يعد معظم وجبات الطعام
   - انا أكل معظم وجباتي في المطاعم

Appendix D

Revised Diabetes Knowledge Test

1. The diabetes diet is:
    - The way most people eat (revised)
    - A healthy diet for most people
    - Too high in carbohydrate for most people
    - Too high in protein for most people

2. Which of the following is highest in carbohydrate?
    - Baked chicken
    - Cultured cheese (revised)
    - White rice (revised)
    - Salted nuts (revised)

3. Which of the following is highest in fat?
    - Low fat (2%) milk
    - Orange juice
    - Corn
    - Honey

4. Which is the following is a “free food”?
    - Any unsweetened food
    - Any food that has “fat free” on the label
    - Any food that has “sugar free” on the label
    - Any food that has less than 20 calories per serving

5. A1C is a measure of your average blood glucose level for the past:
    - Day
    - Week
    - 6-12 weeks
    - 6 months

6. Which is the best method for home glucose testing?
    - Urine testing
    - Blood testing
    - Both are equally good

7. What effect does unsweetened fruit juice have on blood glucose?
    - Lowers it
    - Raises it
    - Has no effect

8. Which should not be used to treat a low blood sugar?
    - 3 hard candies
    - ½ cup orange juice
    - 1 cup diet soda
    - 1 cup skim milk

9. For a person in good control, what effect does exercise have on blood glucose?
    - Lowers it
    - Raises it
    - Has no effect

10. What effect will an infection most likely have on blood glucose?
    - Lowers it
    - Raises it
    - Has no effect

11. The best way to take care of your feet is to:
    - Look at and wash them each day
    - Massage them with alcohol each day
    - Soak them for 1 hour each day
    - Buy shoes a size larger than usual

12. Eating foods lower in fat decreases your risk for:
    - Nerve disease
    - Kidney disease
    - Heart disease
    - Eye disease

13. Numbness and tingling may be symptoms of:
    - Kidney disease
    - Nerve disease
    - Eye disease
    - Liver disease

14. Which of the following is not associated with diabetes?
    - Vision problems
    - Kidney problems
    - Nerve problems
    - Lung problems

संशोधित मधुमेह ज्ञान परीक्षा

1. मधुमेह आहार क्या है?
   - जिस तरह से ज्यादातर लोग खाते हैं
   - ज्यादातर लोगों के लिए एक स्वस्थ आहार
   - ज्यादातर लोगों के लिए इसमें कार्बोहाइड्रेट की मात्रा बहुत अधिक है
   - ज्यादातर लोगों के लिए प्रोटीन की मात्रा बहुत अधिक है
2. इनमें कार्बोहाइड्रेट की मात्रा किसमे अधिकांश है?
   - भुना मुर्गा
   - सुसंस्कृत पनीर
   - सफ़ेद चावल
   - नमकीन अखरोट
3. इनमें से किस मे अधिकांश वसा है?
   - कम वसा (2%) वाला दूध
   - संतरे का रस
   - मक्का
   - शहद
4. इनमें से कौन सा "उचित भोजन " है ?
   - कोई भी बिनचीनी भोजन
   - कोई भी भोजन जिसके लेबल पे "वसा मुक्त "लिखा हो
   - कोई भी भोजन जिसके लेबल पे "चीनी मुक्त "लिखा हो
   - कोई भी भोजन जिसकी सेवा से २० कैलोरी से कम हो
5. रक्त ग्लूकोज स्तर का माप (A1C) कितने समय में लिया जाता है ?
   - दिन
   - सप्ताह
   - ६-१२ सप्ताह
   - ६ महीने
6. घर में ग्लूकोज परीक्षण के लिए इनमेसे सर्वोत्तम विधि कौन सी है ?
   - मूत्र परीक्षण
   - रक्त परीक्षण
   - दोनों समान रूप से अच्छे हैं
7. बिनचीनी फलों का रस पीने पर रक्त ग्लूकोज पर क्या प्रभाव पड़ता है ?
   - कम करता है
   - बढ़ाता है
   - इसका कोई प्रभाव नहीं है
8. निम्न रक्त शर्करा के इलाज केलिए इन में से क्या इस्तमाल नहीं कर सकते है ?
   - ३ कड़ी कैंडी
   - १/२ कटोरी संतरे का रस
   - १ कटोरी परहेज़ सोडा
   - १ कटोरी मलाई निकाला हुआ दूध
9. अच्छा नियंत्रण रखने वालों के लिए व्यायाम का रक्त ग्लूकोज पे क्या असर है?

- कम करता है
- बढ़ाता है
- इसका कोई प्रभाव नहीं है

10. शरीर में संक्रमण का रक्त ग्लूकोज पे क्या असर हो सकता है ?
    - कम करता है
    - बढ़ाता है
    - इसका कोई प्रभाव नहीं है
11. पैर का पंजा का ध्यान रखने का अति श्रेष्ठ तरीक़ा कौन सा है ?
    - उन्हें हर दिन जाँच एवं स्वच्छ रखे
    - उन्हें हर दिन शराब से मालिश करें
    - उन्हें हर दिन एक घंटे के लिए भिगोये
    - जूते को सामान्य से बड़ा आकार खरीदें
12. कम वसा वाला भोजन खाने पर किसका जोख्यम कम हो जाता है?
    - नस की बीमारी
    - गुर्दे की बीमारी
    - दिल की बीमारी
    - नेत्र रोग
13. सुन्न होना एवं झुनझुनी किसके लक्षण हो सकते हैं?
    - गुर्दे की बीमारी
    - नस की बीमारी
    - नेत्र रोग
    - जिगर की बीमारी
14. इन्मे से क्या मधुमेह से नहीं जुड़े है ?
    - नज़रों की समस्या
    - गुर्दे से संबंधित समस्याएं
    - नस से संबंधित समस्याएं
    - फेफड़ों की समस्याएं

اختبار المعرفة المنقحة لمرض السكري

1. الحمية السكرية هي:
   - الطريقة التي ياكل بها معظم الناس
   - اتباع نظام غذائي صحي لمعظم الناس
   - عاليه جدا في الكربوهيدرات بالنسبة لمعظم الناس
   - عاليه جدا في البروتين بالنسبة لمعظم الناس

2. اي من التالي هو اعلى في الكربوهيدرات ؟
   - الدجاج المحمص
   - الجبن
   - الأرز الأبيض
   - المكسرات المملحة

3. اي من التالي هو اعلي في الدهون ؟
   - الحليب ذات الدهون المنخفضة (2 ٪)
   - عصير البرتقال
   - ذره
   - العسل

4. اي من التالي هو "الغذاء المجاني" ؟
   - اي طعام غير مّحلى
   - اي طعام مذكور عليه "خالي من الدهون"
   - اي طعام مذكور عليه "خالي من السكر"
   - اي طعام فيه اقل من 20 سعره حراريه لكل وجبه صغيره

5. A1C هو مقياس لمستوي السكر في الدم لمدة:
   - يوم
   - أسبوع
   - 6-12 أسبوعا
   - 6 أشهر

6. ما هو أفضل طريقه لأختبار السكر في المنزل ؟
   - اختبار البول
   - فحص الدم
   - كلا ألأختيارين صحيحه

7. ما هو تاثيرعصير الفاكهة الغير محلى على مستوى السكر في الدم ؟
   - يخفض مستوى السكر
   - يرفع مستوى السكر
   - ليس له اي تأثير

8. اي من التالي لا ينبغي ان يستخدم لعلاج انخفاض السكر في الدم ؟
   - 3 قطع من الحلوى الصلبة
   - ½ كأس عصير البرتقال
   - 1 كوب مشروب غازي خالي من السكر
   - 1 كوب من الحليب المقشود

9. بالنسبة لشخص يتابع بشكل جيد مرض السكري لديه ، ما هو تاثير ممارسة الرياضه على السكر في الدم ؟
   - يخفض مستوى السكر
   - يرفع مستوى السكر
   - ليس له اي تأثير

10. ما هو تاثير الألتهاب او العدوى على السكر في الدم ؟
    - يخفض مستوى السكر
    - يرفع مستوى السكر
    - ليس له اي تأثير

11. أفضل طريقه للعناية بقدميك هي:
    - النظر أليهم وغسلهم كل يوم
    - تدليكهم مع الكحول كل يوم
    - تنقيع القدمين لمده ساعة واحده كل يوم
    - شراء الاحذيه بحجم أكبر من المعتاد

12. أكل الاطعمه التي تحتوي على كميه قليله في الدهون تقلل من المخاطر الخاصة بك ل:
    - مرض الأعصاب
    - امراض الكلى
    - امراض القلب
    - امراض العيون

13. الخدر و الوخز قد يكونا اعراض ل:
    - امراض الكلى
    - مرض الأعصاب
    - امراض العيون
    - امراض الكبد

14. اي من الأمور التالية غير مرتبطة بمرض السكري ؟
    - مشاكل الرؤية
    - مشاكل الكلى
    - مشاكل الأعصاب
    - مشاكل الرئة

Appendix E

Culturally Specific Diabetes Knowledge Questions

1. What are examples of healthy food choices? (select all that apply)
    a. Steamed vegetables (MS1)
    b. Fried white rice (MS2)
    c. Canned fruit in heavy syrup (MS3)
    d. Low fat yogurt (MS4)
    e. Green salad with pita and hummus (MS5)
2. What are examples of foods that should be limited in your diet? (Select all that apply)
    a. Olive oil (MS6)
    b. Ugali (MS7)
    c. Sugar-sweetened beverages (MS8)
    d. Ghee (MS9)
    e. Fresh vegetables (MS10)
3. What best describes a diabetes diet?
    a. A diet containing a wide variety of food with regular meals and snacks
    b. A diet that is like the way most people eat
    c. A diet too high in fat for most people
    d. A low-calorie diet with many limitations

सांस्कृतिक रूप से विशिष्ट मधुमेह ज्ञान प्रश्न

1. इनमेसे स्वस्थ भोजन विकल्पों के उदाहरण क्या हैं (लागू होने वाले सभी का चयन करें)
    a) उबली हुई सब्जियां
    b) तला हुआ सफेद चावल
    c) भारी चाशनी में डिब्बाबंद फल
    d) कम चिकनाई वाला दही
    e) पिटा और हम्मस के साथ हरा सलाद
2. आपके आहार में सीमित रखने वाले खाद्य पदार्थों के उदाहरण क्या है (लागू होने वाले सभी का चयन करें)
    a) जैतून का तेल
    b) उगली
    c) शक्कर मिश्रित पेय पदार्थ
    d) घी
    e) ताजा सब्जियाँ
3. मधुमेह आहार का सबसे अच्छा वर्णन क्या है
    a) आहार जिसमें विभिन्न प्रकार के भोजन हो और क्रम नियमित भोजन और नाश्ता हो
    b) आहार जो अधिकांश लोगों के खाने के समान है
    c) आहार जिसमें ज्यादातर लोगों के लिए अधिक वसा हो
    d) कई सीमाओं के साथ, कम कैलोरी आहार

الأسئلة المحددة في المعرفة الثقافية لمرض السكري

1. ما الامثله في الخيارات الغذائية الصحية ؟ (حدد كل ما ينطبق)
   a. الخضار المسلوقه
   b. الأرز الأبيض المقلي
   c. معلبات الفاكهة في الشراب الثقيل
   d. الزبادي المنخفض بالدسم
   e. السلطة الخضراء مع الخبز والحمص

2. ما الأمثله من الاطعمه التي ينبغي ان تكون محدوده في النظام الغذائي الخاص بك ؟ (حدد كل ما ينطبق)
   a. زيت الزيتون
   b. الأرز ألأوكالي الأفريقي
   c. المشروبات المحلية بالسكر
   d. السمنه
   e. الخضروات الطازجة

3. ما أفضل وصف لحمية السكري ؟
   a. نظام غذائي يحتوي على مجموعه متنوعة من الاطعمه مع وجبات الطعام العادية بالآظافه الي الوجبات الخفيفة
   b. النظام الغذائي الذي هو مماثل لمعظم ما ياكل به الناس
   c. النظام الغذائي العالي جدا في الكربوهيدرات بالنسبة لمعظم الناس
   d. النظام الغذائي العالي جدا في البروتين بالنسبة لمعظم الناس

Appendix F

Acceptability and Self-Efficacy Questionnaire

1. The diabetes video helped me learn about diabetes.
    - Strongly agree
    - Agree
    - Neutral
    - Disagree
    - Strongly disagree
2. The diabetes video was easy to understand
    - Strongly agree
    - Agree
    - Neutral
    - Disagree
    - Strongly disagree
3. The video helped me understand changes I can make in my diet to improve my diabetes.
    - Strongly agree
    - Agree
    - Neutral
    - Disagree
    - Strongly disagree
4. The video helped me understand how to monitor my blood sugar at home.
    - Strongly agree
    - Agree
    - Neutral
    - Disagree
    - Strongly disagree
5. Health education videos are an effective way for me to learn more about my health.
    - Strongly agree
    - Agree
    - Neutral
    - Disagree
    - Strongly disagree

स्वीस्वीकार्यता और आत्म प्रभावोत्पादकता प्रश्नावली

1. मधुमेह के चलन चित्र से मुझे मधुमेह के बारे में जानने में मदद हुआ
   - दृढ़तापूर्वक सहमत हूँ
   - इस बात से सहमत हूँ
   - तटस्थ हूँ
   - इस बात से असहमत हूँ
   - दृढ़तापूर्वक असहमत हूँ

2. मधुमेह के चलन चित्र को समझना आसान था
   - दृढ़तापूर्वक सहमत हूँ
   - इस बात से सहमत हूँ
   - तटस्थ हूँ
   - इस बात से असहमत हूँ
   - दृढ़तापूर्वक असहमत हूँ

3. यह चलन चित्र ने मुझे अपने मधुमेह को बेहतर बनाने के लिए अपने आहार में बदलावों को समझने में मदद की
   - दृढ़तापूर्वक सहमत हूँ
   - इस बात से सहमत हूँ
   - तटस्थ हूँ
   - इस बात से असहमत हूँ
   - दृढ़तापूर्वक असहमत हूँ

4. इस चलन चित्र से मुझे घर पर मेरी रक्त शर्करा की निगरानी कैसे करें, इसकी जानकारी प्राप्त हुई
   - दृढ़तापूर्वक सहमत हूँ
   - इस बात से सहमत हूँ
   - तटस्थ हूँ
   - इस बात से असहमत हूँ

- दृढ़तापूर्वक असहमत हूँ

5. स्वास्थ्य शिक्षा चलन चित्र मेरे स्वास्थ्य के बारे में और जानने के लिए मेरे लिए एक प्रभावी तरीका है
    - दृढ़तापूर्वक सहमत हूँ
    - इस बात से सहमत हूँ
    - तटस्थ हूँ
    - इस बात से असहमत हूँ
    - दृढ़तापूर्वक असहमत हूँ

استبيان لمعرفة المقبولية و لكفاءتنا الذاتية

1. الفيديوعن مرض السكري ساعدني على التعرف علي مرض السكري.
   - أتفق بشده
   - أتفق
   - محايد
   - لا أتفق
   - لا أتفق بشده

2. كان فيديو مرض السكري سهل الفهم
   - أتفق بشده
   - أتفق
   - محايد
   - لا أتفق
   - لا أتفق بشده

3. الفيديو ساعدني علي فهم التغييرات في النظام الغذائي التي يمكن ان أقوم بها لتحسين مرض السكري ببدني.
   - أتفق بشده
   - أتفق
   - محايد
   - لا أتفق
   - لا أتفق بشده

4. الفيديو ساعدني علي فهم كيفيه مراقبه السكر في دمي و أنا في المنزل.
   - أتفق بشده
   - أتفق
   - محايد
   - لا أتفق
   - لا أتفق بشده

5. أشرطة التربية الصحية هي وسيله فعاله بالنسبة لي لمعرفه المزيد عن صحتي.
   - أتفق بشده
   - أتفق
   - محايد
   - لا أتفق
   - لا أتفق بشده

Appendix G

Qualitative Questions

Examples of open-ended questions included:

- What foods have you given up since being diagnosed with diabetes?
- What foods do you miss the most?
- How do you feel about living with diabetes?
- Do you have any difficulty managing your diabetes?
- Please give examples of foods that you shouldn't eat.
- What suggestions do you have to improve diabetes education for your culture?

गुणात्मक प्रशन

खुले अंत प्रश्नों के उदाहरणों हैं :

- मधुमेह से निदान होने के बाद से आप कौन से खाद्य पदार्थ को खाना छोड़ दिये है?

- आप सबसे ज्यादा कौन से खाद्य पदार्थों को याद करते हैं?

- मधुमेह से जीने के बारे में आप कैसा महसूस करते हैं ?

- क्या आपको मधुमेह के प्रबंधन में कोई कठिनाई है?

- कृपया उन खाद्य पदार्थों के उदाहरण दें जिन्हें आप नहीं खा सकते है

- आपकी संस्कृति के लिए मधुमेह शिक्षा में सुधार करने के लिए आप क्या सुझाव दे सकते हैं?

أسئله

بعض الاسئله المفتوحة تشمل:

- ما الاطعمه التي كنت تركتها منذ تشخيصك مع مرض السكري ؟
- ما هي الاطعمه التي تفتقدها أكثر ؟
- كيف تشعر حيال العيش مع مرض السكري ؟
- هل لديك اي صعوبة في أدارة مرض السكري الخاص بك ؟
- ما ألأمثله من الاطعمه التي لا ينبغي ان تأكل؟
- ما تقترح لتحسين تعليم الناس عن مرض السكري بالنسبه من خلال ثقافتك الخاصة بك ؟

Appendix H

Informed Consent Form
Video-based Diabetes Education for a Culturally Diverse Population

PURPOSE OF RESEARCH

You are invited to participate in a research study on evaluating a diabetes health education video. The primary goal of this research study is to determine whether video-based diabetes health education is an effective education tool for culturally diverse patients.

You were selected as a possible participant in this study because you are currently diagnosed with diabetes or pre-diabetes. This research study is looking for participants who speak Arabic, Hindi, or English and are diagnosed with diabetes.

VOLUNTARY PARTICIPATION

Your participation in this study is entirely voluntary. You are free to terminate your participation in this study at any point without reason. If you decide to terminate your participation, please notify Heather Harris at heather.harris1@bobcats.gcsu.edu or call 706-429-5452 (C).

INCLUSION AND EXCLUSION CRITERIA

By signing this informed consent, you are agreeing to the inclusion criteria. Please read through the inclusion and exclusion criteria entirely.

Inclusion Criteria:

- Male or female aged over 18 years old
- Current diagnosis of diabetes or pre-diabetes
- Proficient in English, Arabic, or Hindi
- Willing to sign an informed consent

Exclusion Criteria:

- Younger than 18 years old
- Not diagnosed with diabetes or pre-diabetes
- Not proficient in English, Arabic, or Hindi

DURATION OF STUDY INVOLVEMENT

This research study is expected to take 12 weeks. The study is estimated to start spring, 2018.

PROCEDURES

If you choose to participate, you will be asked to complete a pre and post video questionnaire. The pre and post questionnaire is estimated to take 10 minutes to complete.

The intervention for this study consists of a 10-minute diabetes educational video. The video will include audio in English and closed captioning in your primary language.

Risks:
Video-based diabetes health education is considered incredibly safe with minimal side effects, not more than typical day to day stressors.

The results of the study will remain confidential and will not be linked with your name. The results are to be used for research purposes only.

PARTICIPANT RESPONSIBILITIES

As a participant, your responsibilities include:

- Complete the pre and post questionnaire
- View the diabetes health education video
- Ask questions as needed
- Tell the researcher if you would like to terminate your participation

POTENTIAL BENEFITS

The researcher cannot guarantee or promise that you will receive any benefits from this study. However, learning more about diabetes may improve your understanding of diabetes and its treatments.

FINANCIAL CONSIDERATIONS

There are no costs associated with participation in this research study.

CONFIDENTIALITY

The purpose of this research study is to obtain data or information on the effectiveness of a diabetes health education video; the results may be disseminated in a nursing or medical journal,

healthcare conference podium, or poster presentations. Your identity and/or your personal health information will not be disclosed**.** Prior to the beginning of the study you will receive a unique identification number that will be on each questionnaire rather than your name.

_____ _____

Signature of Adult Participant Date

_____ _____

Signature of Witness Date

सूचित सहमति प्रपत्र

चलन चित्र आधारित मधुमेह शिक्षा एक सांस्कृतिक रूप से विविध आबादी के लिए

अनुसंधान का उद्देश्य

आप एक मधुमेह स्वास्थ्य शिक्षा चलन चित्र के मूल्यांकन के लिए एक शोध अध्ययन में भाग लेने के लिए आमंत्रित किये जाते है। इस शोध अध्ययन का प्राथमिक लक्ष्य यह निर्धारित करने के लिए है कि सांस्कृतिक रूप से विविध रोगियों के लिए क्या चलन चित्र आधारित मधुमेह स्वास्थ्य शिक्षा एक प्रभावी उपकरण है।

आप इस अध्ययन में संभावित प्रतिभागी के रूप में चुने गये है क्योंकि आपको मधुमेह या पूर्व मधुमेह का निदान किया गया है । यह शोध अध्ययन उन प्रतिभागियों की तलाश में है जो अरबी, हिंदी या अंग्रेजी बोलते हैं और मधुमेह से पीड़ित है ।

स्वैच्छिक भागीदारी

इस अध्ययन में आपकी भागीदारी पूरी तरह से स्वैच्छिक है । बिना किसी कारण के किसी भी समय पर आप इस अध्ययन में अपनी भागीदारी को समाप्त कर सकते हैं। यदि आप अपनी भागीदारी को समाप्त करने का निर्णय लेते हैं, तो कृपया हेथेर हैरिस को सूचित करें (heather.harris1@bobcats.gcsu.edu) 706-429-5452.

समावेश और बहिष्कार मानदंड

इस सूचित सहमति प्रपत्र पर हस्ताक्षर करके आप समावेशन मानदंडों से सहमती देते है । कृपया समावेश और बहिष्करण मानदंडों को पूरी तरह से पढ़ें।

समावेश मानदंड

- 18 वर्ष से अधिक उम्र के पुरुष या महिला
- मधुमेह या पूर्व मधुमेह का निदान किया गया है
- अंग्रेजी, अरबी, या हिंदी में पढ़ने और लिखने में सक्षम
- सूचित सहमति प्रपत्र पर हस्ताक्षर करने के लिए तैयार

बहिष्कार मानदंड

- उम्र 18 साल से कम हो
- मधुमेह या पूर्व मधुमेह से निदान नहीं किया गया है

- अंग्रेजी, अरबी, या हिंदी में पढ़ने और लिखने में सक्षम नहीं है

अध्ययन में भागीदारी की अवधि

इस शोध अध्ययन का अपेक्षित समय 12 सप्ताह है ।यह अध्ययन शुरू होने का अनुमानित समय वसंत

2018 है।

प्रक्रियाएं

यदि आप भाग लेना चुनते हैं, आपको चलन चित्र के पूर्व और पद एक प्रश्नावली सम्पूर्ण करने के लिए कहा जाएगा जिसे पूरा करने में १० मिनट लगने का अनुमान है ।
इस अध्ययन के हस्तक्षेप में 10 मिनट के मधुमेह पे शैक्षणिक चलन चित्र दिखाया जाएगा । इस चलन चित्र में अंग्रेजी में बोला जाएगा और आपकी प्राथमिक भाषा में शीर्षक दिए जयेंगे ।

जोखिम

चलन चित्र -आधारित मधुमेह स्वास्थ्य शिक्षा को कम से कम दुष्प्रभावों के साथ अविश्वसनीय रूप से सुरक्षित माना जाता है, सामान्य दिन-प्रतिदिन तनाव से अधिक नहीं।

अध्ययन के परिणाम गुप्तनीय बने रहेंगे और आपके नाम से नहीं जुड़े होंगे। परिणाम केवल अनुसंधान प्रयोजनों के लिए उपयोग किए जाएँगे ।

प्रतिभागी जिम्मेदारियाँ

एक प्रतिभागी के रूप में, यह आपकी जिम्मेदारियाँ हैं :

- पूर्व और पद प्रश्नावली को पूरा करें
- मधुमेह स्वास्थ्य शिक्षा चलन चित्र देखें
- आवश्यकतानुसार प्रश्न पूछें
- अगर आप अपनी भागीदारी को समाप्त करना चाहते हैं तो शोधकर्ता को बताएं

संभावित लाभ

शोधकर्ता आश्वासन या वादा नहीं कर सकता कि आपको इस अध्ययन से कोई लाभ मिलेगा। हालांकि, मधुमेह के बारे में और अधिक जानकारी की प्राप्ति से मधुमेह और इसके उपचार की आपकी समझ में वृद्धि होगी ।

वित्तीय विचार-विमर्श

इस शोध अध्ययन में भागीदारी के साथ कोई लागत नहीं है।

गोपनीयता

इस शोध अध्ययन का उद्देश्य मधुमेह स्वास्थ्य शिक्षा चलन चित्र की प्रभावशीलता पर विवरण या जानकारी प्राप्त करना है ; यह परिणाम नर्सिंग या मेडिकल जर्नल में , स्वास्थ्य देखभाल सम्मेलन मंच में, या पोस्टर प्रस्तुतिकरण में प्रसारित किए जा सकते हैं। आपकी पहचान और / या आपकी व्यक्तिगत स्वास्थ्य की जानकारी का खुलासा नहीं किया जाएगा। अध्ययन शुरू करने से पहले, आपको एक विशिष्ट पहचान संख्या दिया जाएगा जो आपके नाम के बजाय प्रत्येक प्रश्नावली पर होगी।

वयस्क प्रतिभागी का हस्ताक्षर दिनांक

गवाह के हस्ताक्षर दिनांक

प्रतिभागी के नाम के प्रारंभिक अक्षर

كلية جورجيا: أستمارة الموافقه المسبقه
مديرة البروتكول: هيذر هاريس
أسم البروتكول: أستخدام الفديو لتعليم مجتمع مختلف الثقافات عن مرض السكري

وثيقة الموافقه المسبقه
أستخدام الفديو لتعليم مجتمع مختلف الثقافات عن مرض السكري

الغرض من الدراسه

أنت مدعو للمشاركة في دراسه بحثية لتقييم فيديو حول التوعية الصحية لمرض السكري. الهدف الأساسي من هذه الدراسة هو تحديد ما إذا كان التثقيف الصحي بالسكري المرتكز على الفيديو هو أداة تعليمية فعالة للمرضى من مختلف الثقافات.

لقد تم اختيارك كمشارك محتمل في هذه الدراسة لأنك حالياً مصاب بالسكري أو حالة ما قبل السكري. هذا البحث يرغب بمشاركين الذين يتحدثون العربية أو الهندية أو الإنجليزية ويتم تشخيصهم بالسكري.

المشاركة الطوعية

مشاركتك في هذه الدراسة طوعية تمامًا. أنت حر في إنهاء مشاركتك في هذه الدراسة في أي وقت دون سبب. إذا قررت إنهاء مشاركتك ، فيرجى إبلاغ هيذر هاريس Heather Harris على heather.harris1@bobcats.gcsu.edu أو الاتصال بـالرقم الخلوي 706-429-5452.

معايير التضمين والاستثناء

من خلال توقيع هذه الموافقة المسبقة فإنك توافق على معايير الاشتمال. يرجى قراءة معايير الاشتمال والاستبعاد بالكامل

معايير الاشتمال

> الذكور أو الإناث الذين تزيد أعمارهم عن 18 عامًا
> التشخيص الحالي لمرض السكري أو ما قبل السكري
> قادرة على القراءة والكتابة باللغة الإنجليزية أو العربية أو الهندي
> على استعداد لتوقيع الموافقة المسبقة

معايير الاستبعاد

> أصغر من 18 سنة
> لا يتم تشخيص مرض السكري أو ما قبل السكري
> غير قادر على القراءة والكتابة باللغة الإنجليزية أو العربية أو الهندية

مدة المشاركه بالبحث

من المتوقع أن تستغرق هذه الدراسة 12 أسبوعًا. من المقدر أن تبدأ الدراسة في ربيع عام 2018.

الإجراءات
إذا اخترت المشاركة ، سيُطلب منك إكمال استبيان قبل وبعد الفيديو. يقدر أن الاستبيان السابق وما بعده يستغرق 10 دقائق حتى يكتمل.

يتألف التدخل العلمي في هذه الدراسة من فيديو تعليمي لمرض السكري مدته 10 دقائق. سيكون صوت الفيديو باللغة الإنجليزية والترجمة تكون بلغتك الأساسية.

المخاطر

كلية جورجيا: أستمارة الموافقه المسبقه
مديرة البروتكول: هيذر هاريس
أسم البروتكول: أستخدام الفديو لتعليم مجتمع مختلف الثقافات عن مرض السكري

يعتبر التثقيف الصحي بالسكري المرتكز على الفيديو آمنًا بشكل لا يصدق مع الحد الأدنى من الآثار الجانبية ، وليس أكثر من الإجهاد اليومي المعتاد.

ستظل نتائج الدراسة سرية ولن ترتبط باسمك.

نتائج الدراسه ستستخدم لأغراض البحث فقط.

المسؤوليات المشارك

كمشارك، تشمل مسؤولياتك:
> أكمال الاستبيانما قبل و بعد الفديو
> مشاهدة الفيديو التثقيفي الصحي لمرض السكري
> طرح الأسئلة حسب الحاجة
>أخبار الباحثة إذا كنت ترغب في إنهاء مشاركتك

الفوائد المحتملة

لا يمكن للباحث أن يضمن أو يعد بأنك ستحصل على أي فوائد من هذه الدراسة. ومع ذلك ، فإن تعلم المزيد عن مرض السكري قد يحسن فهمك لمرض السكري وعلاجاته.

الاعتبارات المالية

لا توجد تكاليف مرتبطة بالمشاركة في هذه الدراسة البحثية.

السرية
الغرض من هذه الدراسة البحثية هو الحصول على بيانات أو معلومات حول فعالية فيديو التوعية الصحية لمرض السكري. يمكن نشر النتائج في التمريض أو المجلة الطبية، المنصة مؤتمر الرعاية الصحية، أو عروض الملصقات. ولن يتم الكشف عن هويتك و / أو المعلومات الصحية الشخصية الخاصة بك. قبل بدء الدراسة ، ستتلقى رقم تعريف فريدًا سيكون على كل استبيان بدلاً من اسمك.

توقيع للمشارك البالغ	التاريخ
توقيع الشاهد	التاريخ

Appendix I

Gmail by Google

heather harris1 <heather.harris1@bobcats.gcsu.edu>

Your IRB protocol 9692 is Approved for 2018-03-14 - 2019-03-14

IRB Portal <irb@gcsu.edu> Wed, Mar 14, 2018 at 4:12 PM
Reply-To: irb@gcsu.edu
To: heather.harris1@bobcats.gcsu.edu
Cc: irb@gcsu.edu

GEORGIA COLLEGE
GEORGIA'S PUBLIC LIBERAL ARTS UNIVERSITY

Institutional Review Board
Office of Academic Affairs
irb@gcsu.edu
http://www.gcsu.edu/irb

DATE: 2018-03-14

TO: Heather Harris

FROM: Whitney L. Heppner, Ph.D. Chair of Georgia College Institutional Review Board

RE: Your IRB protocol 9692 is Approved for 2018-03-14 - 2019-03-14

Dear Heather Harris,

The proposal you submitted, "Video-Based Diabetes Education for a Culturally Diverse Population," has been granted approval by the Georgia College Institutional Review Board. You may proceed but are responsible for complying with all stipulations described under the Code of Federal Relationship 45 CFR 46 (Protection of Human Subjects). This document can be obtained from the following address:

http://www.hhs.gov/ohrp/humansubjects/guidance/45cfr46.html

The approval period is for one year, starting from the date of approval. After that time, an extension may be requested. It is your responsibility to notify this committee of any changes to the study or any problems that occur. You are to provide the committee with a summary statement. Please use the IRB Portal (https://irb-portal.gcsu.edu/) to request an extension, report changes, or report the completion of your study.

Finally, on behalf of IRB, we wish you the best of luck with your study. Please contact GC IRB at any time for assistance.

Sincerely,

Whitney L. Heppner, Ph.D.

Appendix J

Gmail by Google

heather harris1 <heather.harris1@bobcats.gcsu.edu>

Revised Diabetes Knowledge Test

Campbell, Pam <pamcamp@med.umich.edu> Tue, Jan 9, 2018 at 8:37 AM
To: heather harris1 <heather.harris1@bobcats.gcsu.edu>

Dear Ms. Harris,

Please feel free to use our Diabetes Knowledge Test. We just ask that you cite our Center as follows: the project described was supported by Grant Number P30DK092926 (MCDTR) from the National Institute of Diabetes and Digestive and Kidney Diseases

As for the translation, please contact Piero Bindi (pbindi@mapigroup.com)at MAPI group whom provides translations of our survey instruments, free of charge.

Thank you,

Pam Campbell

Michigan Diabetes Research Center

Michigan Center for Diabetes Translational Research

University of Michigan Medical School

1000 Wall Street

RM# 6100 Brehm Tower

Ann Arbor, Michigan 48105

Tel: 734-763-5730

Fax: 734-647-2307

Remember to cite the Michigan Diabetes Research Center (MDRC) and/or the Michigan Center for Diabetes Translational Research (MCDTR) in publications:

"The project described was supported by Grant Number P30DK020572 (MDRC) from the National Institute of Diabetes and Digestive and Kidney Diseases" OR the project described was supported by Grant Number P30DK092926 (MCDTR) from the National Institute of Diabetes and Digestive and Kidney Diseases."

From: heather harris1 [mailto:heather.harris1@bobcats.gcsu.edu]
Sent: Monday, January 08, 2018 2:57 PM
To: pamcamp@umich.edu; heather.harris@ung.edu; Sheryl Winn
Subject: Revised Diabetes Knowledge Test

[Quoted text hidden]

****
Electronic Mail is not secure, may not be read every day, and should not be used for urgent or sensitive issues

Gmail by Google

heather harris1 <heather.harris1@bobcats.gcsu.edu>

Revised Diabetes Knowledge Test

Fitzgerald, Tom <tfitz@med.umich.edu> Wed, Mar 21, 2018 at 12:43 PM
To: Heather Harris <Heather.Harris@ung.edu>
Cc: "Campbell, Pam" <pamcamp@med.umich.edu>, "heather.harris1@bobcats.gcsu.edu" <heather.harris1@bobcats.gcsu.edu>

Hello,
I have gone over your changes with the team. There is no problem with the first change. However, they are concerned about the change to "plain yogurt" in the second change. The original version has foods with little or very little carb so it is measuring recognizing carb/no carb foods. Yogurt has up to 12 carbs depending which would be "counted". So while it is less than rice or potato, it isn't measuring the same thing. That would be a good discussion for teaching but not for measuring knowledge. Cultured cheese or hard cheese would be options.

James T. Fitzgerald, PhD
Professor
Department of Learning Health Sciences
217 Victor Vaughn Building
1111 E. Catherine Street
Ann Arbor, MI 48109-2054
ph:734-936-1644 fax:734-936-1641

Associate Director
Education and Evaluation
GRECC
Ann Arbor Medical Center (11G)
2215 Fuller Road
Ann Arbor, MI 48105-2300
ph:734-845-3047 fax:734-845-3298

tfitz@med.umich.edu

[Quoted text hidden]

Appendix K

DNP Translational Research and Clinical Project Proposal
Evaluation Form
Project Title: Video-based Diabetes Education for a Culturally Diverse Population Version # 1

Student Name: Heather Harris, DNP-S, APRN, NP-C

Student Signature:

Committee Chair Name: Dr. Sheryl Winn

Committee Chair Signature:

Committee Member Name: Dr. Deborah MacMillan

Committee Member Signature:

Committee Member Name: Dr. P. Lynne Moody

Committee Member Signature:

Agreement Date: 3/12/2018

	Approved	Approved with the following recommendations	Not Approved
Background and Significance			
Background information demonstrates the focused need or problem.	✓		
Literature review supports	✓		

significance / relevance of problem / proposed project / intervention			
Need, feasibility and significance are clearly presented	✓		
Problem Statement or Purpose			
Problem/purpose clearly described	✓		
Scope of project realistic and appropriate	✓		
Theoretical Framework			
Framework (theoretical/conceptual/practice) is described/evident and applicable	✓		
Other:			
Project Description			
Literature, benchmarks and supporting data provided and organized into integrated synthesized summary	✓		
Project objectives stated in feasible and measurable terms	✓		
Congruence of organizations' strategic plan to project is described	✓		
Other:			
Project Design			
Appropriate for objectives	✓		
Clear rationale for actions/method	✓		
Setting and group clearly described	✓		
Implementation methods/tools are feasible and clearly described	✓		
Resources/supports and risks/threats and benefits noted	✓		
Time line is clearly described and feasible	✓		

Project includes well defined opportunities for student to demonstrate leadership.	✓			
Evaluation Plan				
Evaluation plan is coherent / consistent with project plan	✓			
Evaluation measures linked to objectives	✓			
Outcomes / evidence-based measures appropriate for objectives	✓			
Tools / instruments described and linked to measures and objectives	✓			
Method of analysis clearly described for each measurement.	✓			
References				
References that are appropriate to the topic and in APA format	✓			
Approvals				
Letters of support/Statement of Mutual Agreement from cooperating agencies provided.	✓			
Informed Consent, if necessary, meets human subject requirements	✓			
All approvals are in place	✓			
Writing and organization				
APA format followed appropriately; writing is scholarly and clear; appropriate for doctoral level education.	✓			
Relevant program/clinical questions				
Student can articulate response to program/clinical questions arising	✓			

Table 1

Demographic Characteristics of Participants

Variable	Frequency (*n*)	Percentage (%)
Age in years		
18-53	16	50.0
54+	15	46.9
No answer	1	3.1
Gender		
Male	17	53.1
Female	15	46.9
Region of birth		
Africa	11	34.4
North or South America	4	12.5
Asia	14	43.8
Middle East	3	9.4
Europe	0	0
Other	0	0
Years lived in U.S.		
0-5	15	46.9
6+	12	37.5
No answer	5	15.6
Primary Language		
Arabic	6	18.8
Hindi	11	34.4
English	15	46.9
Highest education level		
Less than high school	7	21.9
High school graduate	12	37.5
Some college	1	3.1
College graduate	8	25.0
Graduate degree	4	12.5

Table 2

Overall Revised Diabetes Knowledge Test Results

Question number	Pretest score	Posttest score	Change in score
1	59.4%	71.9%	+12.5%
2	65.6%	78.1%	+12.5%
3	25%	59.4%	+34.4%
4	21.9%	75%	+53.1%
5	37.5%	59.4%	+21.9%
6	71.9%	90.6%	+18.7%
7	28.1%	50%	+21.9%
8	25%	46.9%	+21.9%
9	75%	93.8%	+18.8%
10	53.1%	78.1%	+25%
11	62.5%	84.4%	+21.9%
12	53.1%	81.3%	+28.2%
13	50%	75%	+25%
14	53.1%	81.3%	+28.2%
Total	46.7%	73.2%	+24.5%

Table 3

Overall Culturally Specific Diabetes Knowledge Question Results

Question number	Pretest score	Posttest score	Change in score
MS1	84.4%	93.8%	+9.41%
MS2	87.5%	93.8%	+6.3%
MS3	96.9%	96.9%	0%
MS4	56.3%	68.8%	+12.5%
MS5	59.4%	71.9%	+12.5%
MS6	34.4%	62.5%	+28.1%
MS7	21.9%	59.4%	+37.5%
MS8	59.4%	78.1%	+18.7%
MS9	37.5%	65.6%	+28.1%
MS10	65.6%	93.8%	+28.2%
Total	60.3%	78.4%	+18.1%

Note: MS = multiple select