



Counseling Adults to Choose a Heart Healthy Diet to Appropriately Manage Hypertension in a Local Ambulatory Clinic in Tucson, Arizona

by

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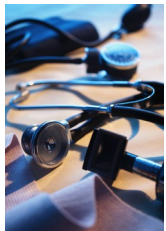


Objectives

- Background
 - Purpose and Aims
 - Local Problem
 - Theoretical Framework
 - Methods
 - Results
 - Conclusion
 - Recommendations
 - References
 - Questions
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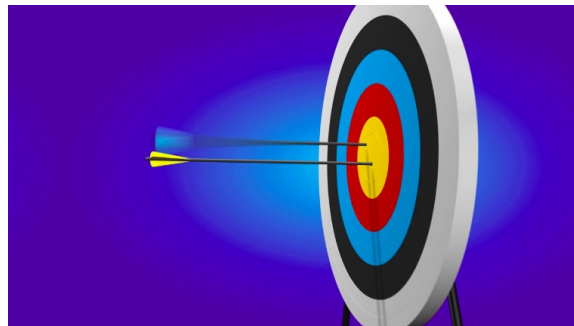
Background

- Background
 - Leading cause of deaths: Cardiovascular disease
 - \$320 billion annually
- Scope of Problem
 - 1 in 3 adults in US, Pima County, Central Tucson, AZ
 - Only 50% controlled
 - 25% are obese, 14% smokers, and 17% alcoholics
- Problem
 - Risk for cardiovascular disease deaths doubles with
 - Systolic Blood Pressure (SBP) of 20 mmHg increase, and/or
 - Diastolic Blood Pressure (DBP) of 10 mmHg increase
- Patients' Long-term Goal
 - Improve the control of blood pressure to prevent development of hypertension
 - 2017 ACC/AHA and JNC 8 recommends the DASH Diet to be the most effective



Purpose and Aims

- Purpose:
 - Increase the quality of life of the clinic population
 - Increase their knowledge in proper food selection to lower their blood pressure
 - Avoid developing health consequences from cardiovascular diseases
- Aims
 - Improve provider knowledge
 - Increase providers' prescribing dietary prescription
 - Evaluate participants' satisfaction with content of intervention



Theoretical Framework

- 7 subsystems that make the entire individual system:
 - Achievement
 - Affiliative
 - Aggressive
 - Dependency
 - Sexual
 - Eliminative
 - Ingestive

- Concepts
 - Consist of the dynamic relationship between patient and provider
 - Person
 - Environment
 - Health
 - Caring

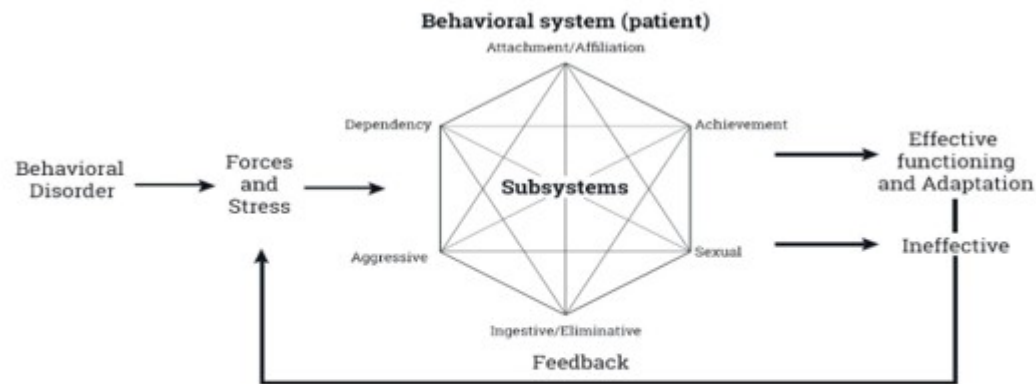
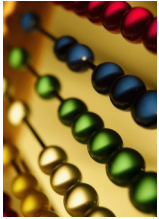


Figure 1: Behavioral system model. This figure shows the subsystem within the entire system. Adapted from 'Dorothy Johnson: Behavioral System Model' by A. Gonzalo, 2014, Nurseslabs/ Retrieved from <https://nurseslabs.com/dorothy-e-johnsons-behavioral-system-model/>

Methods



- Design
 - Quasi-experimental, pre- and post-test, single group comparison study with convenience sampling
- Setting
 - Southwest Region, Central Tucson Arizona
 - Each provider approximately has 1k-1500 patient panel
 - Primary Care, Pediatric Care, endocrinology, urology, imaging, and phlebotomy services
- Participants
- Inclusion- providers who manage patients
- Exclusion criteria- those who do not manage patients
 - 15 providers
 - Medical Doctors, Advanced Nurse Practitioners, Physician Assistants



Methods

- Data Collection
 - Pre-test Survey
 - Post-test Survey
 - Quantitative Data
 - Free-write response data
- Types of Questions
 - Multiple choice
 - Likert Scale
 - True and False
 - Yes and No
 - Free-write Responses



Methods

- Data Collection
 - Potential participants invited
 - Convenience sampling
 - Participants determined
 - Pre-test completed
 - Brief educational intervention Presentation
 - Post-test completed



- Analysis
 - Comparison study from responses
 - Descriptive statistics
 - Mean calculations
 - Change in percentage calculations
 - Summarize Free-write responses



- Ethical Consideration
 - Respect for person
 - Beneficence
 - Justice



Intervention

- Introduction: Disclosure Form
- Background
- Hypertension: Definition & Physiology
- Evidence-Based Studies & 2017 ACC/AHA & 2014 JNC 8 Hypertension Guidelines
- DASH Diet
- Dietary Prescription
- Coding
- Conclusion



Intervention: Dietary Prescription

Using Diet to have a better Blood Pressure

Step 1: Get measuring cups and spoons to measure all the food your picked to eat.

Step 2: Start by making small changes. Start by eating more vegetables in your diet for one month, then add another food group until you are used to eating the all the foods in diet list.

Step 3: Choose foods you like to eat from the list.

Step 4: Get in the habit of reading nutrition labels.

Step 5: Count your salt intake. Remember to count between 1500mg-2400mg

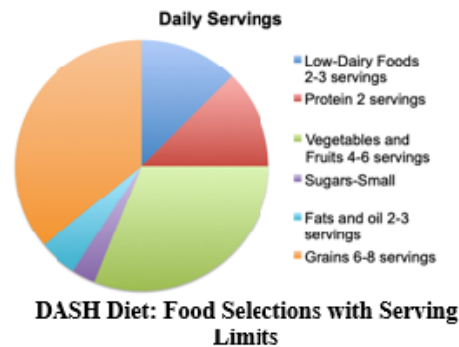
Daily Target Goals to Meet DASH Diet:

Nutrient	DASH diet target
Total fat (% kcal)	27
Saturated fat (% kcal)	6
Cholesterol (mg)	150
Protein (% kcal)	18
Fiber (g)	31
Magnesium (mg)	500
Calcium (mg)	1,240
Potassium (mg)	4,700
Sodium (mg)	2,400
Total Daily Calorics	2,100-2,300 calories

Figure. Nutrients Daily Target Goals. Total daily goals for each nutrients (Lin et al., 2013)

****Medications drop your top number of your blood pressure by 10 to 15 points (Juraschek, Miller, Weaver, & Appel, 2017)**

****The DASH Diet drops your top number of your blood pressure by 5 to 21 points (Juraschek, Miller, Weaver, & Appel, 2017)**



Provider Instructions: _____

Dietary Prescription

Food to choose in Food Groups	Servings equivalent and Daily Goal
Vegetables (max daily limit: <u>4 to 6 servings</u>)	Servings: Goal is to eat 4 to 6 servings
1 cup of raw leafy vegetables	1
1/2 cup of chopped or cooked vegetables	1
Fruits	Servings: Goal is to eat 4 to 6 servings
1 medium size piece of fruit	1
Dairy-Low or Fat free (max daily limit: <u>2-3 servings</u>)	Servings: Goal is to eat 2 to 3 servings
8 ounces of milk	1
1 cup of yogurt	1
1/2 ounces of cheese	1
Whole Grains (max daily limit: <u>6 to 8 servings</u>)	Servings: Goal is to eat 6 to 8 servings
1 slice of bread	1
1 small size tortilla	1
1 ounces of dry cereal	1
1/2 cup of cooked rice	1
1/2 cup of pasta	1
1/2 cup of oatmeal	1
Meat (max daily limit: <u>2 servings</u>)	Servings: Goal is to eat 2 servings
3 ounces (size of a deck of cards) of lean beef	1
3 ounces (size of a deck of cards) of lean chicken	1
3 ounces (size of a deck of cards) of fish	1
3 ounces (size of a deck of cards) of lean pork	1
Nuts, seeds, beans, legumes (max ONLY 5 DAYS PER WEEK: <u>1 servings</u>)	Servings: Goal is to eat 1 serving, 5 days only in a week
1/3 cup of nuts	1
2 tablespoons of seeds	1
1/2 cup of dry beans	1
1/2 cup of split peas	
1/2 cup of dry lentils	
Fats and oils (max daily limit: <u>2 to 3 servings</u>)	Servings: Goal is to eat 2 to 3 servings
1 teaspoon of vegetable oils	1
Salt (max daily limit: 1500mg to 2400mg)	Goal is to eat 1500mg to 2400mg
Total Daily Calories (max daily limit: 2100-2300 calories)	Goal is to eat 2100 to 2300 calories

Results: Participants

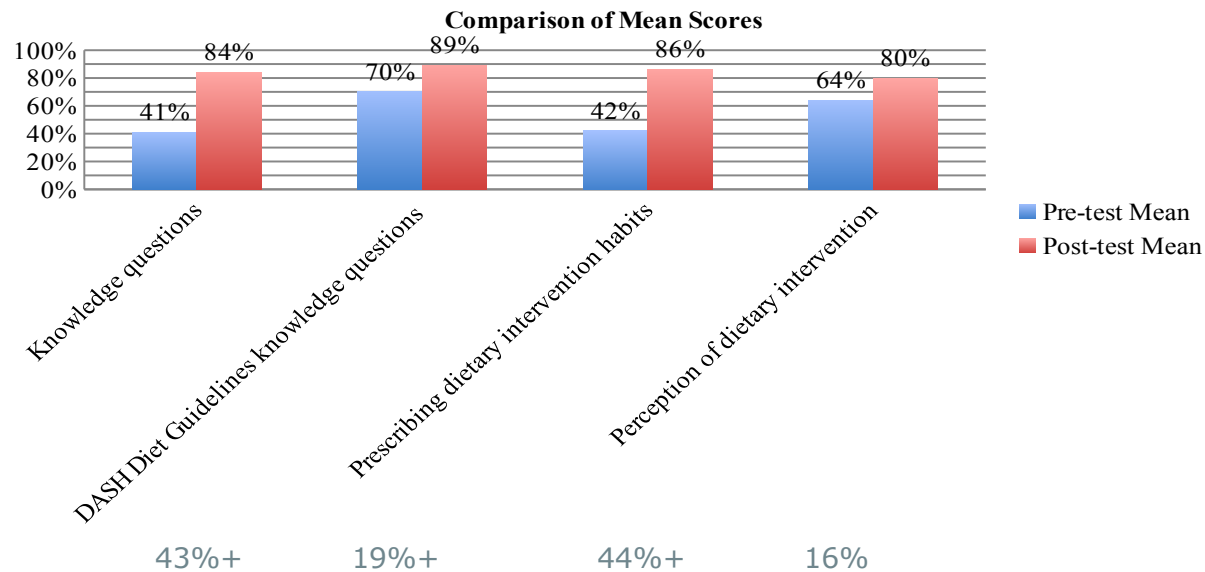
- Participants
 - 12 total participants
 - 6 medical doctors
 - 4 advanced practice nurses
 - 2 physician assistants
 - Experienced providers:
 - n=9 \geq 8 yrs of experience
 - n=1 1-3 yrs of experience
 - n=2 $<$ 1 yr of experience
 - Manage 140-710 pre/hypertensive patients



Results-Effectiveness

- Effectiveness
 - Pre and Post test scores comparison
 - Calculated change in percentage of scores
 - Results were all + changes

- Aims
 1. Improve provider knowledge
 2. Increase providers' prescribing dietary prescription
 3. Evaluate participants' satisfaction with content of intervention



Results-Satisfaction

- Satisfaction
 - Post-test asked Yes and No questions if:
 - Length of presentation was appropriate
 - Usefulness of dietary prescription
 - User friendliness of dietary prescription
 - Post-test responses: 100% YES
 - Free-write responses
 1. Wheat belly and diet of hope suggestions
 2. "Great Job!"
 3. "Great Job!"
 - Overall, participants were satisfied with intervention



Conclusion

- QI Project
 - Deemed effective and appropriate
 - Bridged knowledge gaps
 - Providers in clinic gained knowledge and a tool for patient education (customizable, timely)
 - Purpose of the project met



Conclusion

- QI project addressed hypertension
 - Used the DASH Diet
 - Providers coaching patients how to lower BP by using the DASH Diet and dietary prescription
 - This local clinic took the step forward and addressed hypertension using this QI project



Recommendations

- Recommendations #1
- Increase distribution of dietary prescription to patients
- Send it via patient portal
- Provide hard copies
- Purpose of the project met
- Commercialize the DASH Diet using posters



- Recommendations #2
- Confirm the findings in this project
- Repeat the study at another clinic
- Assess both the effectiveness of patient education and patients' understanding post teaching
- Conduct the study at a larger scale

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Questions?

