Education Intervention to Improve Knowledge and Screening for Sickle Cell Carrier Status among African Americans of Reproductive Age

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INTRODUCTION, BACKGROUND & SIGNIFICANCE

- Sickle cell trait is a heterozygous carrier state not a disease
- Sickle cell disease is an autosomal recessive disorder that occurs when and individual inherit gene "s" from each of their parents
- In the United States, SCT is identified through the newborn screening program when SCD is identified.
- About 2 million people in the US have SCT.
- 1 in every 13 Blacks or African Americans are born with SCT.
- Newborn screening is done to every newborn in all states since 2006
- Lack of knowledge of sickle cell trait status can lead to unintentional production of an offspring with SCD.
- SCD has poor prognosis as 1% of children born with the disease die within their first 3 years of life.
- In the US, the median age of survival of people living with SCD is 58 years.

METHODS

- A Quasi experimental design
- African American church in Brooklyn
- Participants: individuals between the ages 15-45, able to speak and write in English, and are without the diagnosis of SCD or SCT. 32 PARTICIPANTS
- Pre-post-post test and educational intervention
- 10-item SCTKQ with 2 questions of intent will be measured
- SPSS was used for statistical analysis
- Wilcoxon Signed Ranked test to compare score taken at all 3 time points.
- Chi-Square- intention to screen
- Frequency- action towards screening

DEMOGRAPHY

- 32 participants
- African Americans: M =11, F =21
- Parent = 13, Non-parent = 19
- College Educated = 29, vocational or less = 3
- Age group: 18- 27= 6; 28-37 = 15; 38-45 =11

RESULTS

- Increase in sickle cell trait knowledge
  - Pre & immediate post intervention . P = 0.002
  - Pre & 2-week post intervention. P = 0.001
- Increase in number of participants who intended to obtain screening
  - Pre intervention; N = 19
  - Immediate & 2-week post intervention: N = 26
- No statistical significance in intention to obtain screening; p = 0.346
- Participant's action towards screening
  - Took Action: 26
  - No action: 6

SCTKQ SCORE

	MEAN SCORE	SD	P VALUE
PRE-INTERVENTION	7.03	2.571	
IMMEDIATE POST INTERVENTION	8.59	1.898	0.002
2 WEEK POST INTERVENTION	8.49	1.883	0.001

DISCUSSION

Implications to Clinical practice, healthcare policy, healthcare safety, education, and economy.

- Provider's role in education, screening, referral, and documentation
- Policy addressing notification, EHR documentation, and follow-up
- Education to reducing incidence of SCD and health outcomes
- Formal and informal education setting, groups, individual
- Cost of prevention is less than treatment cost.

CONCLUSION

Public education strategies, screening policies, and standardized reporting should be developed to improve healthcare outcomes of this population

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