

Sugar Sweetened Beverages and Type II Diabetes

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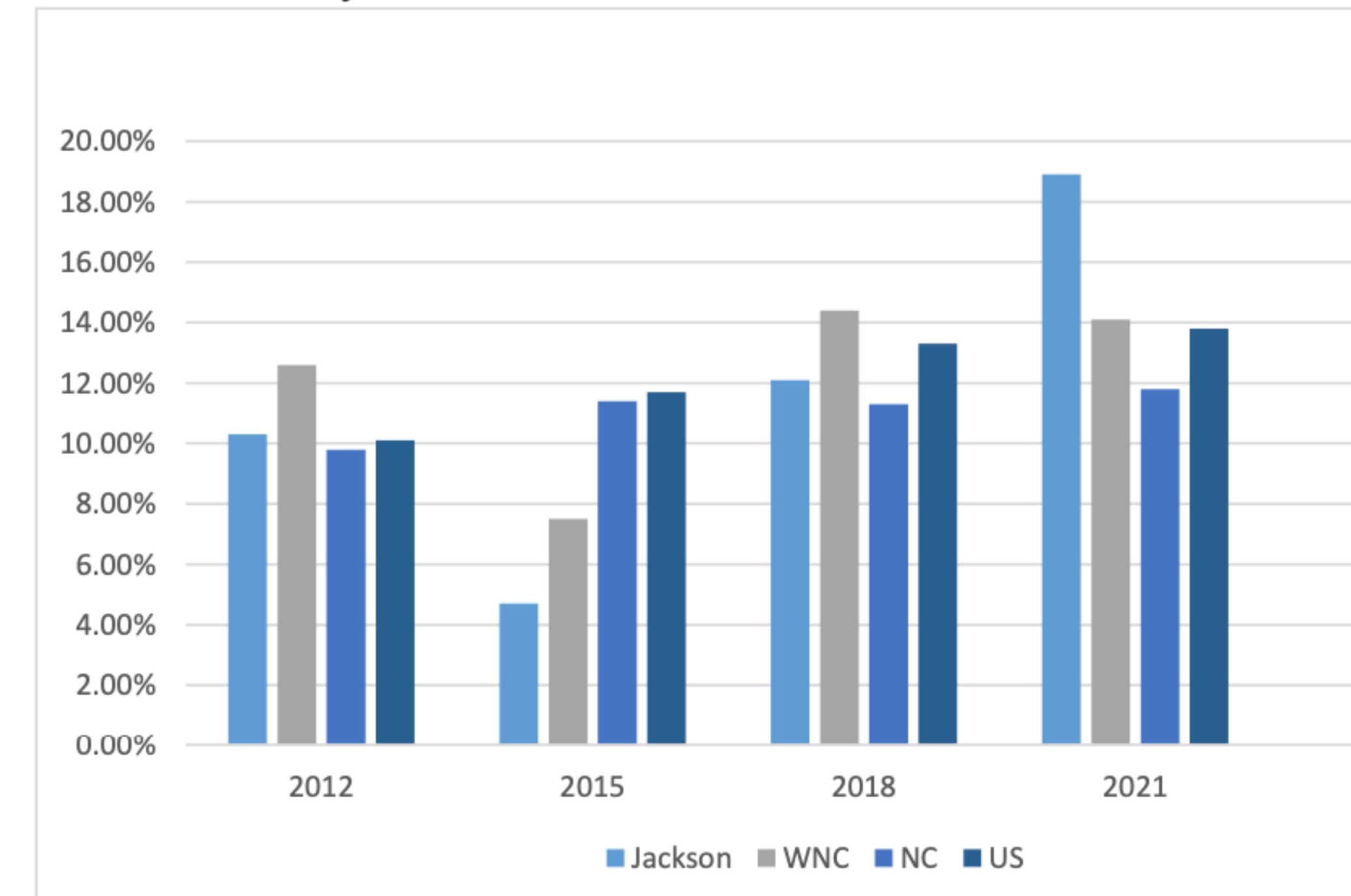
ABSTRACT

This study evaluated whether an educational intervention combined with behavior tracking could reduce sugar-sweetened beverage (SSB) consumption in patients with type II diabetes in rural Western North Carolina. Over six weeks, a randomized sample of 12 adults participated in the intervention at Mission Primary Care of Cashiers. Results showed a significant reduction in SSB intake ($p < 0.01$), with average weekly consumption decreasing from 19.83 to 12.83 servings. These findings suggest that integrating patient education and behavior tracking into clinical practice can support long-term behavior change, improving diabetes management, and potentially reducing healthcare costs.

INTRODUCTION / PURPOSE

- Type II diabetes is a major health concern in Western North Carolina (WNC)
 - In 2021, 14% of adults in WNC had type II diabetes
 - In 2021, 19% of Jackson County residents were diagnosed with diabetes
 - Significant increase from 2015 when rate was only 4.7%
- Research shows that increased sugar consumption exacerbates diabetes in those already diagnosed with the disease
 - Sugar sweetened beverages (SSBs) contain high levels of sugar and are easy and quick to consume
- 2023 benchmark data for Mission Primary Care of Cashiers showed only 31% of patients with type II diabetes met a hemoglobin A1c goal of under 8%
- The goal of this project was to utilize patient education to help reduce consumption of SSBs to decrease overall sugar intake and in turn help patients obtain better control of their diabetes

Prevalence Rate of Diabetes



METHODS

Subjects: Random sample of 12 adults with a diagnosis of type II diabetes who consumed at least one SSB weekly

Setting: Mission Primary Care of Cashiers serving patients in rural areas, mainly in Jackson County

Tools/Measures: Participants were screened and recruited during office visits and verbally asked their initial weekly SSB consumption

- SOFT DRINKS (REGULAR SODA)
- SPORTS DRINKS
- ENERGY DRINKS
- SWEET TEA
- FRUIT JUICES AND FRUIT JUICE DRINKS
- ALCOHOLIC BEVERAGES
- FLAVORED WATER WITH ADDED SUGAR
- SUGAR SWEETENED COFFEE DRINKS

1 Serving=8 ounces

SUGAR FREE AND DIET DRINKS ARE EXCLUDED

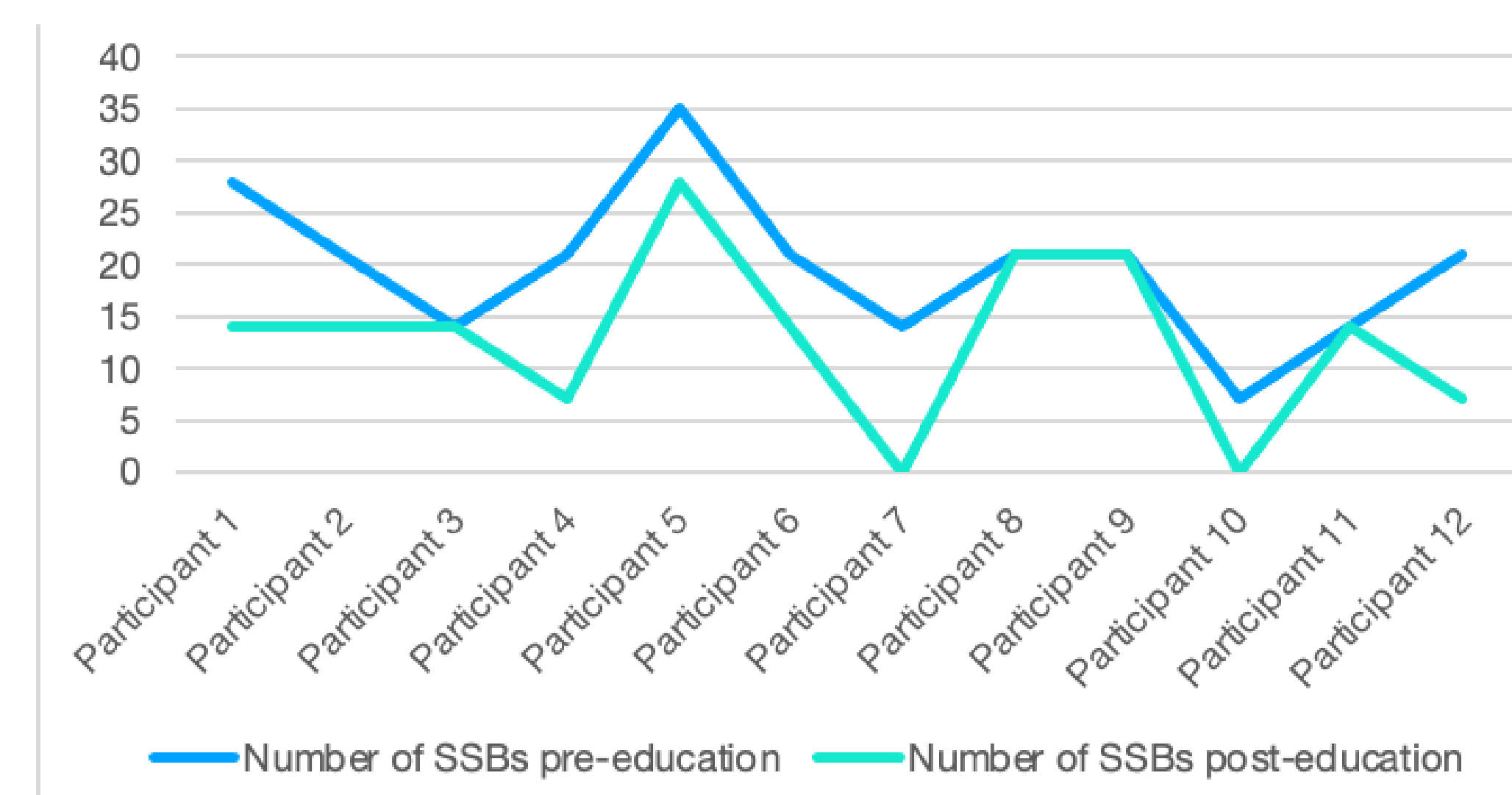
INTERVENTION / DATA COLLECTION

- Educational handout identifying various beverages with high sugar content and the importance of reducing and/or eliminating their consumption
- Took place over six weeks in November-December 2024
- Participants recorded SSB consumption using weekly tracking sheet
- Follow up at three and six weeks

RESULTS

- Average weekly decrease from 19.83 to 12.83 servings
- Five participants reported a substantial decrease of 7 to 15 servings weekly
- Two participants reported discontinuing SSB consumption with zero servings of SSB per week
- The dependent t-test conducted post-intervention measuring SSB consumption was statistically significant ($p < 0.01$)
- This intervention implied that, with 95% confidence, on average, a person will consume between 0 to 14 fewer SSBs per week post intervention

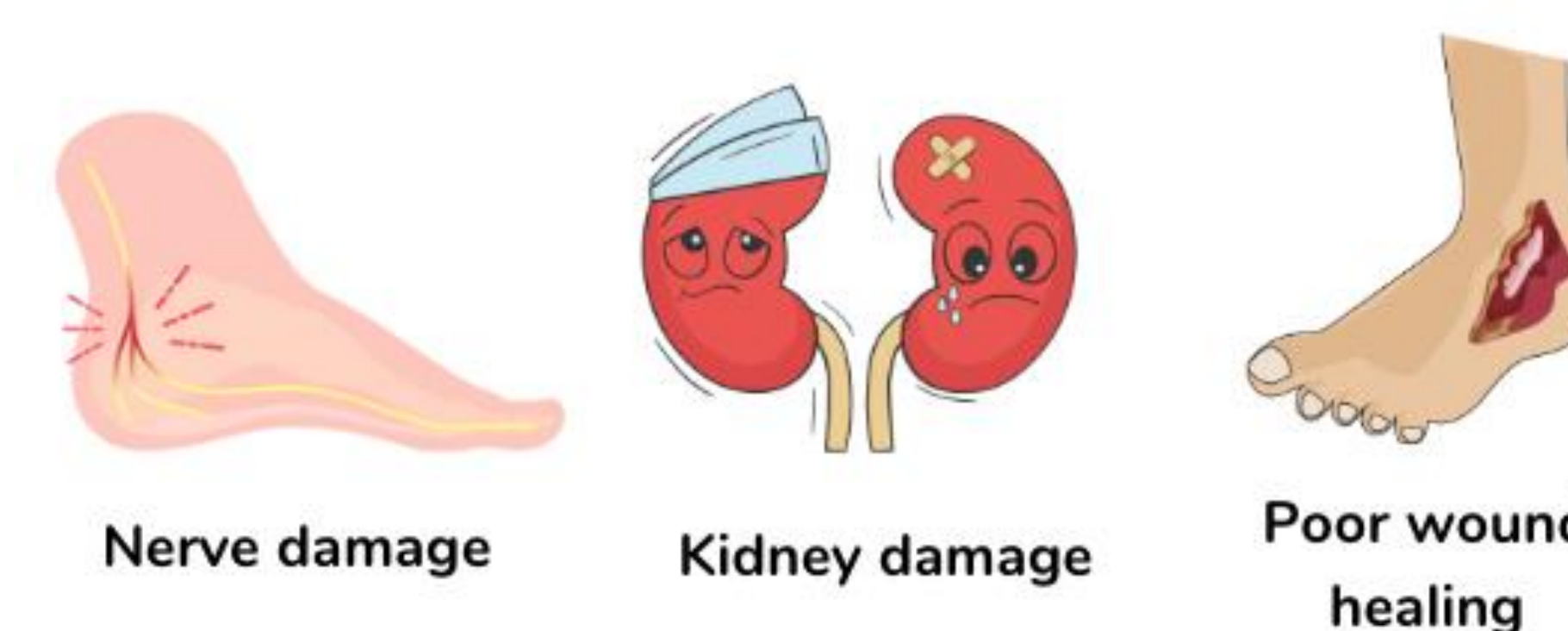
Weekly SSB Consumption



SIGNIFICANCE AND IMPLICATIONS

- An education intervention with behavior tracking can be a simple and cost-effective intervention to help decrease SSB consumption in patients with type II diabetes
- These findings can be translated into practice by incorporating patient education and behavior tracking into patient visits
- Decreasing SSB consumption has potential to lessen burden of diabetes-related complication and healthcare costs

Uncontrolled Diabetes Increases Risk of



RECOMMENDATIONS AND CONCLUSION

- To promote ongoing reductions in SSB consumption, the healthcare providers and staff can provide patients with updated educational resources on SSB reduction and type II diabetes
- Encourage patients to monitor their SSB intake, set reduction goals, and review their progress during follow-up visits
- Refer patients to dietitians or community wellness programs for additional support
- Schedule hemoglobin A1C lab tests every three months to increase patient awareness, facilitate medication adjustments, and provide re-education
- This project had an impact on practice as it improved the quality of care by educating patients about healthier drink choices that can help improve diabetes management and overall health
- Patient progress with behavior changes can be easily accessed with a tracking tool that can be evaluated by telephone, email, or in-person visits

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