



# 3,2,1 Cook: Intergenerational Approach to Nutritional Education

Julien T, Alan H, Max T, Drew P, Aron B, Sarah D, Sarah S, Gerald R, Kelsey N, Elizabeth H, Suraj M  
Cincinnati, OH, Department of Medicine

The project described was supported by the National Center for Research Resources and the National Center for Advancing Translational Sciences, National Institutes of Health, through Grant 8 UL1 TR000077-05. The content is solely the responsibility of the authors and does not necessarily represent the official views of the NIH. Special thanks to Mercy Neighborhood Ministries and the participants of the program.

## Introduction

- 48% of residents in the Walnut Hills neighborhood of Cincinnati, OH live below the poverty line. (1)
- Mercy Neighborhood Ministries (MNM) is a non-profit organization that serves the ZIP code containing Walnut Hills by providing programming to address job readiness, employability, food security, prayer services, and general information about local community services.
- Walnut Hills is a food desert containing no local access to a grocery store or supermarket as of April 2017.
- Working single mothers are especially vulnerable to time scarcity, which has been shown to be associated with consumption of already-prepared foods and fast foods, which have been linked to chronic health conditions such as diabetes, cardiovascular disease, and cancer. (2)
- Nutritional programs have been shown to be more effective if directed both towards young mothers with children and towards the school-aged children. (3)
- The objective of this project was to assess and educate working mothers and their children on cooking options that are quick to prepare, nutritious, affordable, and can be made at home.



Figure 1. Image of Kroger in Walnut Hills Neighborhood. Closed in 2017 leaving the area with no nearby grocery options.



Figure 2. Diagram depicting challenges that may contribute to poor family nutrition.

## Methods

- We designed and executed a series of workshop-like sessions for single mothers and their children.
- The goal of the workshop was to introduce alternative and potentially healthier, more affordable, and accessible food options.
- The curriculum also included topics such as food safety to encourage safer food handling and storage habits.
- Our project was primarily an educational intervention, so we planned to evaluate our work through a series of brief pre-session and post-session surveys to be completed by the participating mothers.
- We worked to find recipes that could be prepared relatively quickly and on a limited budget and chose recipes that consisted of ingredients that could be found at the food pantry at MNM.
- The project site had limited cooking appliances which complicated the selection of cooking ideas.
- For meal ideas, one session was dedicated to breakfast, lunch, and dinner.
- From the feedback we received from participating mothers, we continually modified our curricula from session to session.

## Results

- Most mothers already have a stable foundation of cooking, nutrition, and food safety knowledge.
- Participating mothers cite competing time commitments as the single largest obstacle to preparing meals at home.
- Of the five mothers who completed the surveys, four reported wanting to cook more often.

Responses Completed by Participants Prior to the First Cooking Session

Question	Number of Responses
How many meals per week do you cook?	
0	0
1-3	3
4-7	2
Would you like to cook more often?	
Yes	4
No	1
Reasons affecting how often you cook?	
Lack of time.	5
Cost of cook.	1
Lack of equipment.	1
Lack of knowledge.	1

Figure 3. Pre-session survey responses from participants.

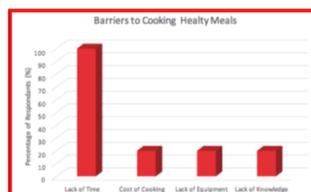


Figure 4. Barriers to cooking pre-session survey responses from participants.

## Conclusion

- Lack of cooking knowledge was a less significant barrier to consistently making home cooked meals for Walnut Hills families compared to the lack of accessibility to healthy, affordable foods and time to prepare them.
- The culinary environment fosters positive intergenerational interaction and collaboration.
- Cooking classes are resource and equipment intensive and may not be feasible or advisable in low resource environments.
- Based on anecdotal feedback we received, the families enjoyed the cooking sessions and found them informative and productive.



## Future Direction

From the very beginning of our community project, Mercy Neighborhood Ministries made clear that they wanted us to focus on connecting with the community rather than collecting data or building a long-term program. This directive shaped our proposed project as well as our evaluation methods and expectations for the program. Ultimately, we wish that we could offer the participating families ongoing cooking lessons in a fully equipped kitchen setting. We also expect that the impact of our program would be borne out most effectively in a more longitudinal environment. Though it is unlikely that 3, 2, 1 Cook! will be replicated in the future, we do believe that addressing the underlying issues of access and affordability of nutritious meals for low-income families in Walnut Hills remains a top priority for the community.

## References

1. Walnut Hills neighborhood in Cincinnati, Ohio (OH), 45206 detailed profile. *City-Data.com*. 2016.
1. Variyam J, Blaylock J, Lin B, Ralston K, Smallwood D. Mother's nutrition knowledge and children's dietary intakes. *American Journal of Agricultural Economics*. 1999;81(2):373-384.
1. Jabs J, Devine CM. Time scarcity and food choices: An overview. *Appetite*. 2006;47(2):196-204.

