

Abstract

Background: There is a great sense of confusion among collegiate athletes on what constitutes a nutritious diet. Frequently, college athlete's energy levels do not adequately support their strenuous training regimens. Commonly, athletes do not consume enough calories based on their energy expenditure. Additionally, calories that are consumed often are not sufficient in micronutrients.

Objective: In conjunction with nutrition education sessions, the aim of this needs assessment was to determine if this was a recurring problem with our study population specifically, participating female collegiate sports teams.

Methods: A 15 question needs assessment analyzing participants' current strengths and weaknesses in regards to nutrition were conducted. The aim of the questions was to determine athlete's self-efficacy to consume nutrient-rich diets both on and off campus.

Results: Based on this assessment, participants expressed difficulty finding healthy alternatives on their college campus and a few other areas.

Conclusion: Findings reveal there is a need to develop resources to help student-athletes navigate a healthier way of eating on campus where it may not be as easy as cooking for yourself off-campus. Based on the initial findings our approach for future interventions is to develop materials such as easy to read infographics and engage student-athletes on the how to's and tips designed to make it easier to eat on-campus.

Introduction

In a study regarding college female athletes, it was revealed that nutrition knowledge and comfortability of making healthy dietary choices was lacking among collegiate athletes¹. We wanted to see if NAU had the same issues. Based on a needs assessment done at NAU, it was evident that student-athletes lacked comfortability in making healthy dietary choices when eating out at a restaurant, eating off campus, and even eating on campus. In an additional study, it was shown that after finding a lack of nutrition knowledge among female collegiate student-athletes, an intervention of a nutrition education program mostly increased their understanding of the relationship between nutrition and athletic performance⁴. The nutrition education program that was implemented in this study covered important nutrition topics regarding energy, change in weight, body composition, macronutrients, micronutrients, and hydration⁴. In a third study, it was shown that male and female collegiate student-athletes had an average score of 52.7% on an 11 question nutrition knowledge survey, pre-intervention⁵. The survey questions asked in this study were regarding nutrition topics such as the importance of carbohydrates and fluids in performance, timing and volume of foods and fluids before, during, and after exercise, using protein as fuel and as an aid in muscle production, and also becoming aware of how important micronutrients such as vitamins and minerals are in athletic performance⁵. All in all, there are similarities showing a lack of nutrition knowledge and confidence in making nutritious decisions that could potentially benefit athletic performance at many universities among all collegiate student-athletes.

Methods

Participants

- ✓ 27 female collegiate athletes 18 years old or older (Table 1)
- ✓ Ready and willing to make a dietary change

Procedures

A 15 question needs assessment was emailed to female-student athletes participating in a PRANDIAL lab study. Survey responses were collected and recorded. An infographic containing Dr. Furhman's ANDI scores (Aggregate Nutrient Density Index) was provided on multiple occasions during nutrition education sessions to help guide the student-athletes to a more nutrient dense diet anywhere and anytime they decide to eat².

Data Collection

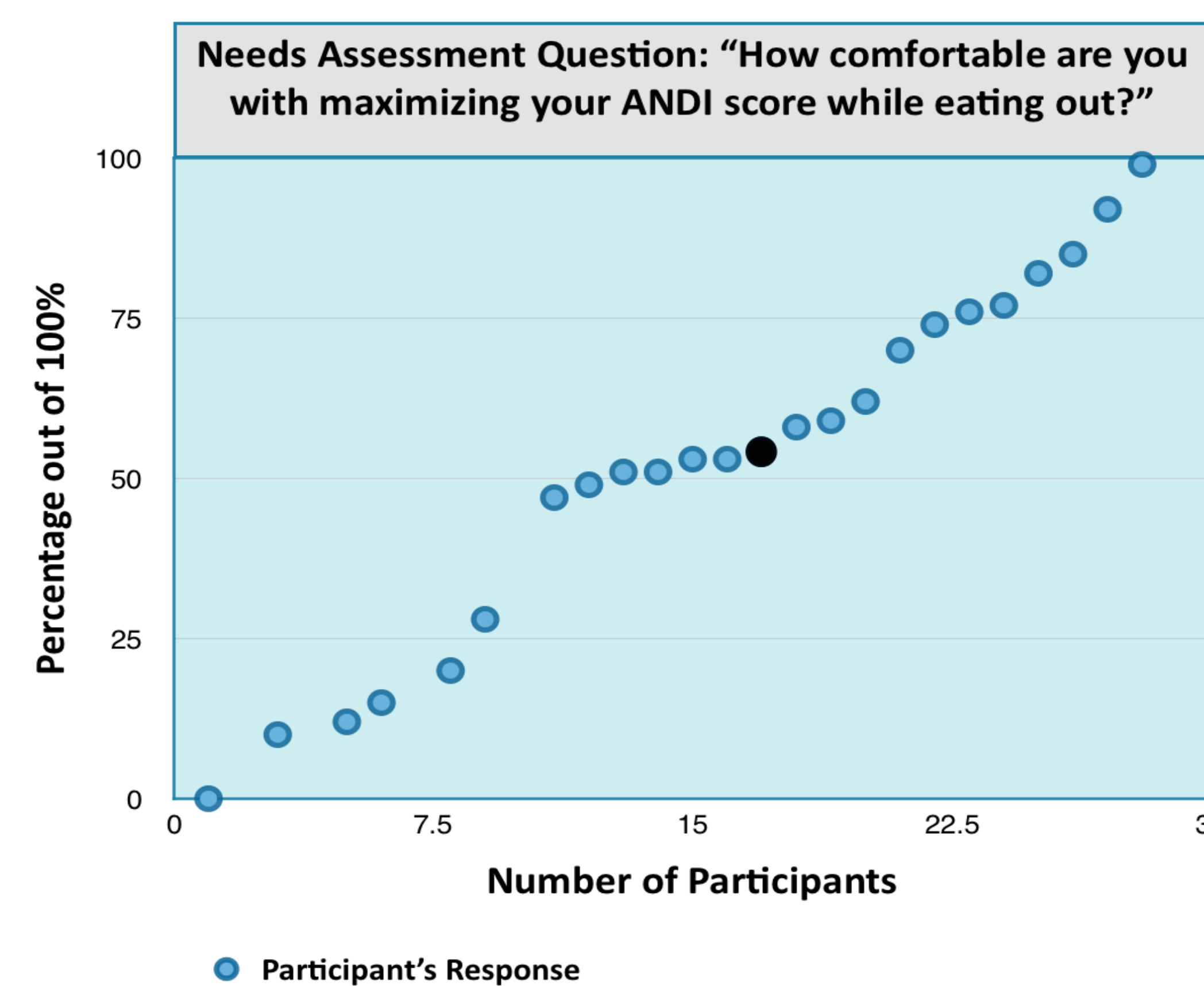
Research electronic data capture (REDCap) was used to gather data from the needs assessment survey responses³.

Sport	Number of Participants
Women's Diving	3
Women's Swimming	16
Women's Basketball	8

Table 1. Outline of female collegiate student-athlete participation⁶

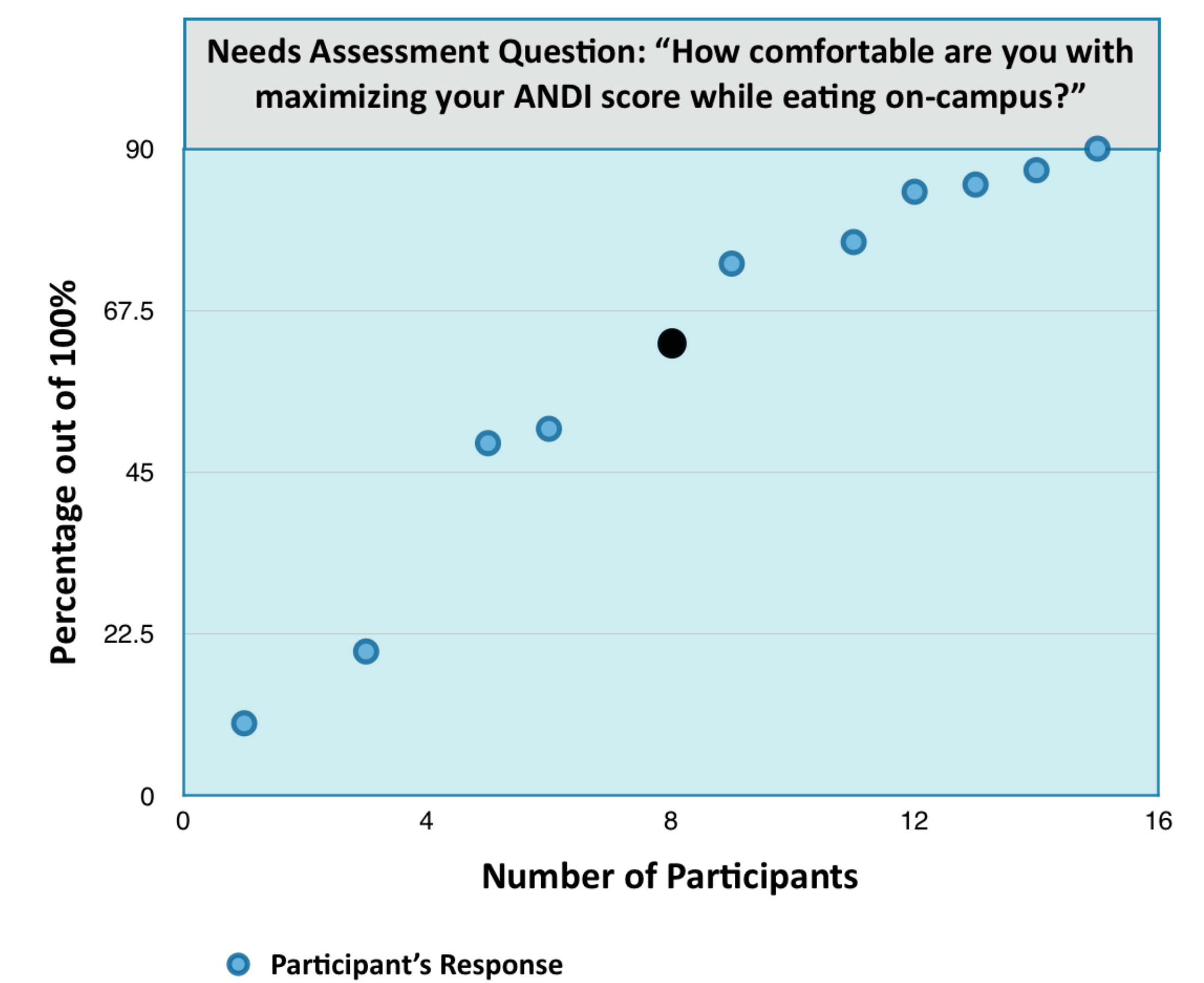
Results

Pre-intervention results showed that student-athletes were least comfortable with maximizing their ANDI scores while eating out at a restaurant, and most comfortable with maximizing their ANDI scores while eating off-campus². An average response for the comfortability of maximizing ANDI scores while eating out was 54.45% (Graph 1), while the average for eating on-campus was 62.7% (Graph 2), and the average for eating off-campus was 66.78% (Graph 3).

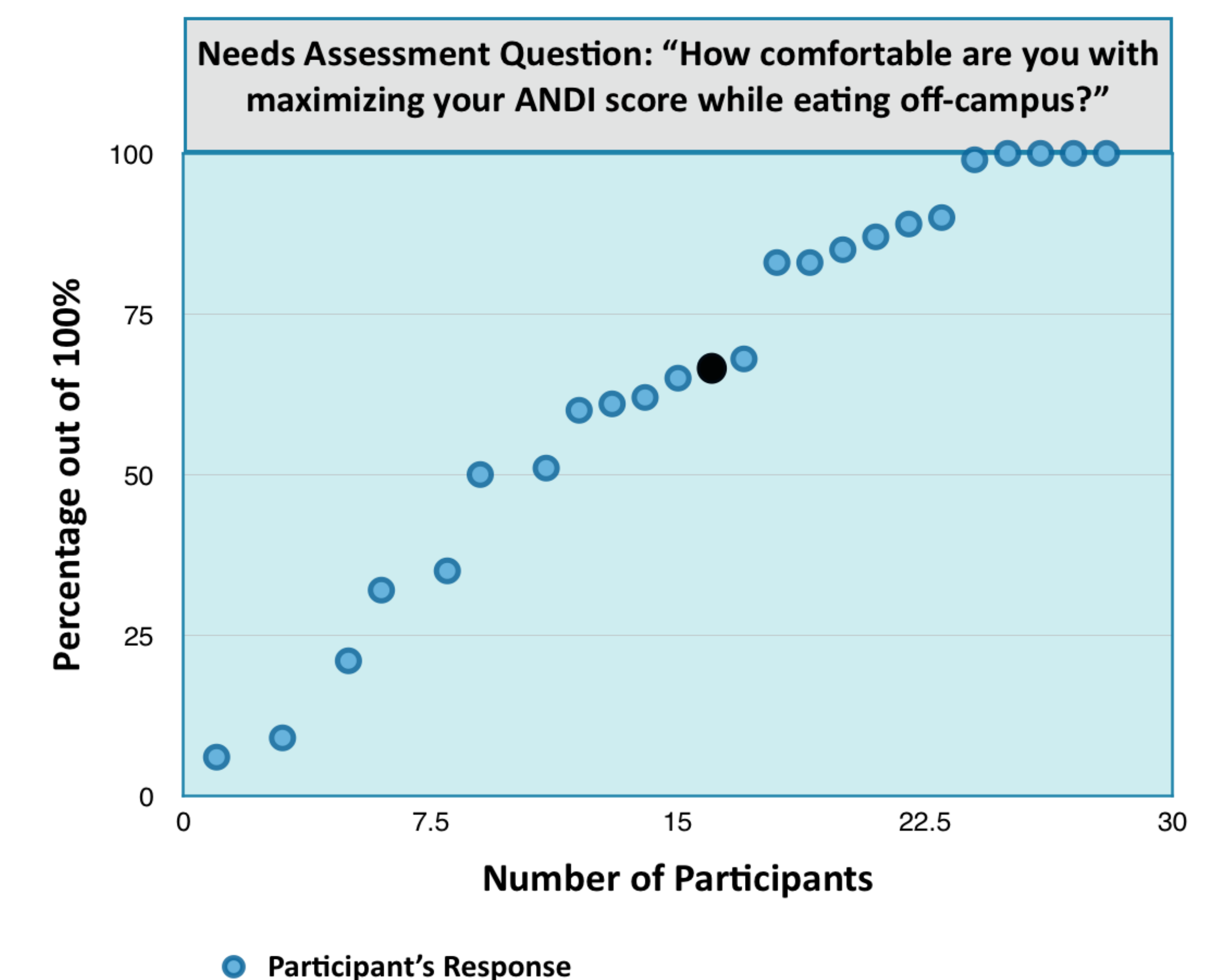


Graph 1. Participant responses to needs assessment question about eating at a restaurant

Results



Graph 2. Participant responses to needs assessment question about eating on-campus



Graph 3. Participant responses to needs assessment question about eating off-campus

Discussion & Conclusion

It was concluded that a good starting point would be to continue nutrition education with returning student-athletes and also implement additional nutrition education with incoming freshmen student-athletes. This would be beneficial since there is a lack of confidence in making healthy dietary choices. Monthly nutrition education meetings would be implemented in a required course that all incoming student-athletes are enrolled in, in hopes of increasing nutrition knowledge and maximizing performance early on in a student-athlete's four year NCAA eligibility period.

References

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6. Icons made by Freepik from www.flaticon.com

Contact Information

Sarah Takach
sat292@nau.edu

PRANDIAL Lab
PrandialLab@nau.edu

