

## ABSTRACT

**Research outcome:** To determine the relationship between nutrition professionals' knowledge, consumption, and recommendations of whole grains.

**Methods:** A cross-sectional study was conducted with nutrition professionals (n=480). Participants were recruited via email and social media from October 2020-February 2021. The participants completed a validated 21-question survey about whole grain knowledge, consumption, and recommendations.

**Analysis:** The analyses included descriptive statistics and Pearson correlation tests.

**Results:** Survey respondents included 72.5% Registered Dietitians Nutritionists (RD/RDN) and 27.5% RD in training (e.g. dietetic intern, student). Nutrition professionals felt whole grains were important in their own diet (93%) and their patient/clients' diet (75%). A slight majority of nutrition professionals (58%) strongly or somewhat agreed that "personal grain preference influences the grains that you recommend to patients/clients", despite 67% agreeing to the statement, "client income/background influences the types of grains you recommend to patients/clients." Nutrition professionals correctly classified 14.9±3.2 of the 23 food classification questions and 9.6±1.8 for the 11 whole grain knowledge statements. Nutrition professionals with direct patient care (n=373) have personally consumed 15.9±3.74 different grains and recommended 9±4.15, the correlation being r=0.29, indicating a significant positive correlation.

**Conclusions:** Nutrition professionals were able to identify whole grain foods and demonstrated knowledge of whole grain benefits; however, there was a disconnect between knowledge and recommendations. Future research should further investigate nutrition professionals' knowledge, beliefs, and attitudes towards whole grains. To align nutrition professionals' whole grain knowledge and recommendation practices, there is a need for enhanced training and education on whole grain varieties.

## BACKGROUND

- 98% of Americans do not meet whole grain recommendations (Dietary Guidelines for Americans 2020-2025)
- Whole grain consumption has shown a reduced risk of many chronic conditions (e.g. cardiovascular disease, type 2 diabetes, and cancer.) (Koo, 2018; Ampatzoglou, 2015)
- Registered Dietitian Nutritionists (RD/RDNs) are trained on evidence-based practices (Academy of Nutrition and Dietetics)
- Self-efficacy among dietitians promote whole grains is low (Edwards 2008; Chase 2003)

## METHODS

- A cross-sectional study was conducted with nutritional professionals (n=480).
- Participants were recruited via email and social media platforms from December 2020 to February 2021.
- The participants completed a 21-question validated survey about whole grain knowledge, consumption, and recommendations.

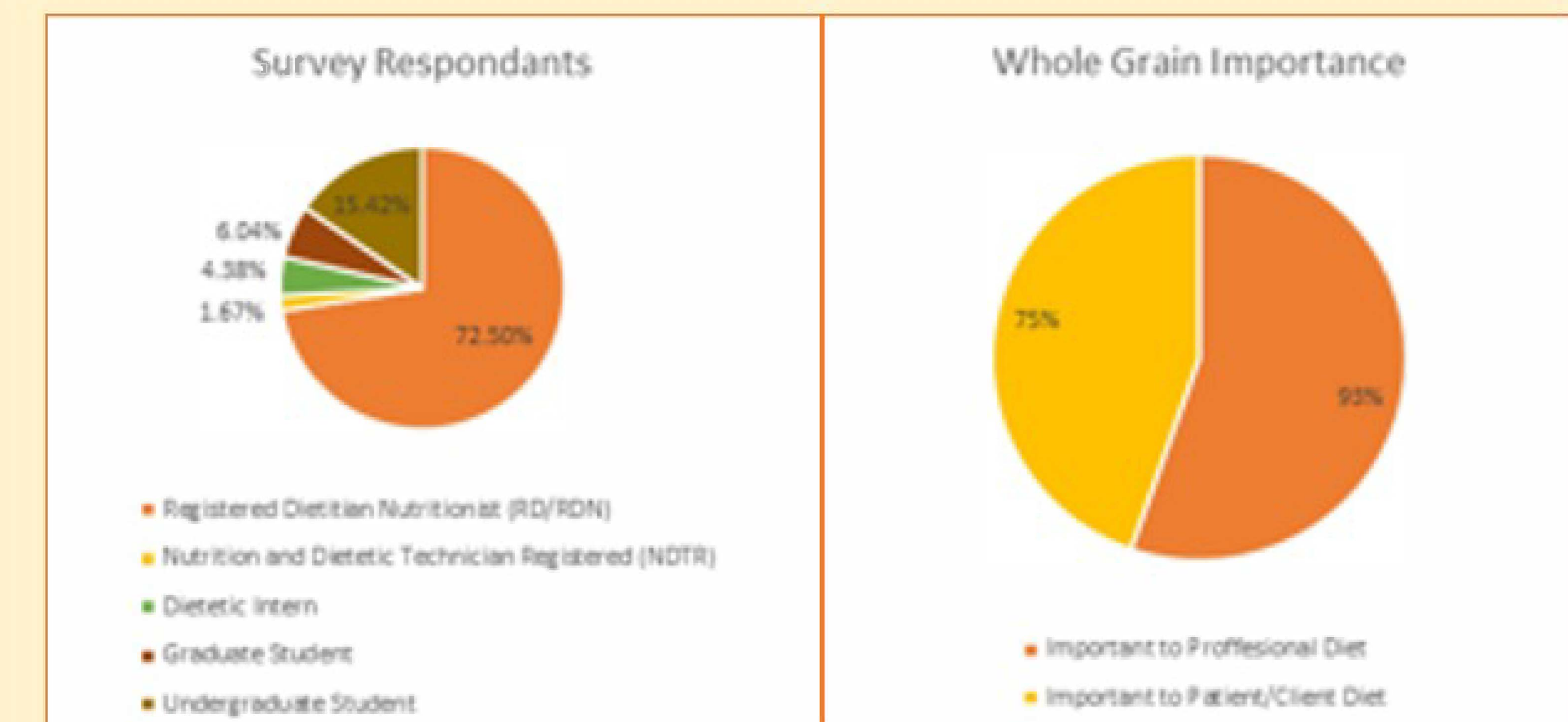


## RESULTS

Table 4: Participants believes about statements to be true or false about whole grains

Whole Grain	FALSE Frequency (%)	TRUE Frequency (%)	Unsure Frequency (%)	n Total
Causes weight gain	462 (96.25)	10 (2.08)	8 (1.67)	480
Causes inflammation	421 (87.89)	25 (5.22)	33 (6.89)	479
Decreases inflammation	85 (17.71)	276 (57.5)	119 (24.79)	480
Lower risk of bowel cancer	9 (1.88)	451 (94.15)	19 (3.97)	479
Better weight management	20 (4.18)	443 (92.48)	16 (3.34)	479
Improves cholesterol	13 (2.71)	449 (93.74)	17 (3.55)	479
Reduced risk of heart disease	9 (1.88)	457 (95.41)	13 (2.71)	479
Reduces risk of type 2 diabetes	23 (4.8)	424 (88.52)	32 (6.68)	479
Healthier waist measurements	37 (7.74)	356 (74.48)	85 (17.78)	478
Causes spike in blood sugar levels	412 (86.01)	39 (8.14)	28 (5.85)	479
Helps keep you feeling fuller longer	14 (2.93)	455 (95.19)	9 (1.88)	478

1 Correct answers are bolded.



## CONCLUSION

- Nutrition professionals are knowledgeable about whole grains.
- There was a disconnect between nutrition professionals' knowledge and recommendations.
- Future research should further investigate nutrition professionals' knowledge, beliefs, and attitudes towards whole grains.
- There is a need for improved training and education on whole grain varieties to align nutrition professionals' whole grain knowledge and recommendation practices