Development of A Curriculum to Improve Nutritional Knowledge and Self Efficacy Surrounding Disordered Eating Behaviors Among High School Athletes

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Introduction

- There is a high prevalence of eating disorders and disordered eating among adolescents.
- Although a high-risk population, there are limited resources available for adolescent athletes.
- Nutritional education has been shown to be effective in reducing incidence of disordered eating behaviors.

Objective

To develop and pilot and online curriculum aimed at improving nutritional knowledge and self efficacy surrounding disordered eating bevagiors and attitudes among adolescent athleres.

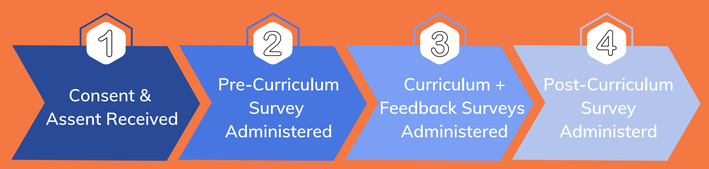
Methodology

A 6-module curriculum was administered online to a convenience sample of adolescent athletes between 13-21 years old. Participants included those who engage regularly in recreational physical activity and sports, and had no history of eating disorders.

Modules

The Roles of Macronutrients in the Body
The Difference Between Athlete and Non-Athlete Needs
Underfueling and Related Risks
Building A Balanced Diet
Body Image
Review and Practice

Pre- and post- curriculum questionnaires were obtained and scored to assess short term changes in nutritional knowledge, behavior, and attitudes. Feedback surveys were gathered to evaluate the curriculum's content and delivery to make future improvements.



Analysis

Upon completion of the curriculum, a paired sample t-test was used to compare individual participants' pre- and post-curriculum questionnaire scores.
A P-value < 0.05 was considered statistically significant.

Main Outcome Measures:

1. Change in pre/post scores
2. Curriculum content, design, and delivery via feedback survey responses.

Final Sample Characteristics

- n = 7
- Response Rate = 47%
- Mean Age = 15 years old
- 50/50 male:female ratio
- All 7 participants played sports
  - 5 currently in-season

Table 3: Results from Paired t-Tests Assessing Changes in Nutritional Knowledge, Behaviors, and Attitudes from Pre- and Post-Curriculum Participation

	Pre-Test		Post-Test			
Categories and Sub-Categories	**M**	**SD**	**M**	**SD**	***t* (df)**	***P***
Overall Nutritional Knowledge	19.9	2.8	26.9	3.3	-12.12 (6)	0.00*
General Nutritional Knowledge	3.7	1.5	4.6	1.4	-1.69 (6)	0.14
Carbohydrate Nutritional Knowledge	5.9	0.9	6.6	1.8	-1.18 (6)	0.28
Fat Nutritional Knowledge	6.6	1.4	8.9	2.6	-2.64 (6)	0.04*
Protein Nutritional Knowledge	3.7	1.8	6.86	1.6	-2.98 (6)	0.03*
Overall Behavior	20.6	2.9	19.1	2.8	1.76 (6)	0.13
General Behavior	2.3	0.8	2.7	1.3	-1.44 (6)	0.20
Carbohydrate Behavior	3.0	0.8	3.0	0.8	0.00 (6)	1.00
Protein Behavior	4.6	1.3	4.4	0.8	0.21 (6)	0.84
Hydration Behavior	2.9	1.1	2.7	1.1	1.00 (6)	0.36
Restrictive Behavior	7.9	1.1	6.3	2.1	2.09 (6)	0.08
Overall Attitude	9.4	4.2	9.6	2.8	-0.15 (6)	0.89
General Attitude	8.3	4.2	8.9	2.1	-0.59 (6)	0.58
Protein Attitude	0.9	0.4	0.4	0.5	2.12 (6)	0.08
Restrictive Attitude	0.3	0.5	0.3	0.5	0.00 (6)	1.00
Total Score	49.9	8.1	55.6	7.2	-3.39 (6)	0.02*

M = Mean, SD = Standard Deviation
*$P < 0.05$
Statistical test used (paired sample *t*-test)
Total possible scores for each category are shown/as follows: Overall nutritional knowledge (40), general nutritional knowledge (6), carbohydrate nutritional knowledge (9), fat nutritional knowledge (15), protein nutritional knowledge (10); overall behavior (30), general behavior (5), carbohydrate behavior (4), protein behavior (7), hydration behavior (4), restrictive behavior (10); overall attitude (18), general attitude (15), protein attitude (1), restrictive attitude (2); total score (88).

Results/ Findings

7 participants completed both pre- and post- curriculum questionnaires.

- **There was a significant positive change in overall nutritional knowledge scores.**
- **Feedback revealed satisfaction in the curriculum's content and delivery.**

Conclusion

Our curriculum was successful in enhancing nutritional knowledge. Adjustments should be made for future iterations in order to observe positive changes in behaviors and attitudes. The content was age appropriate and short term observations were observed.

A larger sample size would improve statistical power. Additionally, methods to decrease rates of attrition should be considered.

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