Medical Student Attitudes Towards Nutritional and Exercise Integration in the Curriculum

Tyler Beauchamp; Aditya Devarakonda[1]; Varsha Chiruvella[1]; Jessica Hatch[1]; Patrick Lorenz[1]; Lisa Renee Hilton M.D.[1]
The Medical College of Georgia at Augusta University[1]

INTRODUCTION

- Since 2011, the AAMC has recommended medical schools emphasize nutrition and exercise management in their curricula [1].
- Despite its necessity to preventative health, it is still not fully integrated into medical education across the United States [2,3].

OBJECTIVES

- The purpose of this study is to assess whether a knowledge gap in preventative measures of nutrition and exercise exists amongst medical students.
- We aim to see if current medical education provides students the appropriate background for application of preventative medicine to clinical practice.

METHODS

1. Study participants pooled from current first, second, and third year medical students attending The Medical College of Georgia.
2. 614 total students were contacted for participation. 42 first-year students, 49 second-year students, and 45 third-year students completed the survey.
3. The survey consisted of 20 questions based on a 10-point Likert Scale that asked students to assess their own confidence on various aspects of nutrition and exercise education.
4. Survey responses were aggregated and separated by year of medical training. Average response scores for each cohort were compared using a Mann-Whitney U test.

Table 1. Survey Results

	Year	N	Mean	Med	STD
Lowering Metabolic Syndrome Risk	M1	42	5.83	7	2.22
	M2	49	6.45	6	2.23
	M3	45	6.24	7	2.23
	p-values: M1 vs M2 = 0.26; M1 vs M3 = 0.38; M2 vs M3 = 0.71				
Counseling Dietary Changes for Treatment/Prevention	M1	42	5.93	7	2.27
	M2	49	6.61	7	2.30
	M3	45	6.42	7	2.30
	p-values: M1 vs M2 = 0.17; M1 vs M3 = 0.37; M2 vs M3 = 0.71				
Heart Failure and Sequalae Prevention	M1	42	5.45	6	2.23
	M2	49	6.00	6	2.42
	M3	45	5.71	6	2.44
	p-values: M1 vs M2 = 0.30; M1 vs M3 = 0.55; M2 vs M3 = 0.63				
Kidney Failure and Sequalae Prevention	M1	42	3.76	3	2.26
	M2	49	5.08	5	2.43
	M3	45	4.80	5	2.17
	p-values: M1 vs M2 = 0.020; M1 vs M3 = 0.04; M2 vs M3 = 0.69				
Liver Failure and Sequalae Prevention	M1	42	4.179	4	2.41
	M2	49	5.33	5	2.66
	M3	45	5.07	5	2.32
	p-values: M1 vs M2 = 0.05; M1 vs M3 = 0.08; M2 vs M3 = 0.74				
Current Exercise Science Education Confidence	M1	42	6.08	6	2.26
	M2	49	6.55	7	2.11
	M3	45	6.02	6	2.39
	p-values: M1 vs M2 = 0.35; M1 vs M3 = 0.99; M2 vs M3 = 0.36				
Exercise Science Education Confidence Prior to Med School	M1	42	5.46	5	2.40
	M2	49	5.49	5	2.64
	M3	45	5.24	5	2.49
	p-values: M1 vs M2 = 0.98; M1 vs M3 = 0.80; M2 vs M3 = 0.81				
Current Nutrition Education Confidence	M1	42	6.33	6	1.73
	M2	49	6.46	7	1.96
	M3	45	5.98	6	2.20
	p-values: M1 vs M2 = 0.70; M1 vs M3 = 0.45; M2 vs M3 = 0.33				
Nutrition Education Confidence Prior to Med School	M1	42	5.06	5	2.27
	M2	49	5.27	5	2.28
	M3	45	4.60	5	2.20
	p-values: M1 vs M2 = 0.60; M1 vs M3 = 0.55; M2 vs M3 = 0.20				
Confidence in Current Nutrition Curriculum	M1	42	4.43	5	2.36
	M2	49	5.00	5	1.86
	M3	45	4.24	4	2.30
	p-values: M1 vs M2 = 0.53; M1 vs M3 = 0.53; M2 vs M3 = 0.09				
Confidence in Current Exercise Curriculum	M1	42	4.60	5	2.66
	M2	49	4.56	5	1.70
	M3	45	4.20	4	2.31
	p-values: M1 vs M2 = 0.47; M1 vs M3 = 0.30; M2 vs M3 = 0.35				
Importance of Nutritional Education in Preventative Medicine	M1	42	8.45	8	1.47
	M2	49	8.60	9	1.30
	M3	45	8.04	8	1.77
	p-values: M1 vs M2 = 0.70; M1 vs M3 = 0.29; M2 vs M3 = 0.16				
Importance of Exercise Education in Physician Training	M1	42	8.05	8	1.51
	M2	49	8.33	9	1.84
	M3	45	7.89	8	1.83
	p-values: M1 vs M2 = 0.20; M1 vs M3 = 0.69; M2 vs M3 = 0.20				
Importance of Physician's Role including Preventative Care	M1	42	8.40	9	2.02
	M2	49	8.86	10	1.63
	M3	45	8.96	10	1.61
	p-values: M1 vs M2 = 0.26; M1 vs M3 = 0.17; M2 vs M3 = 0.80				

RESULTS

- Across the three classes:
  - Average confidence levels in baseline nutrition and exercise understanding were **less than 6.6/10**.
  - Average confidence in their ability to educate patients on nutrition and exercise needs were **less than 6.61/10**.
  - Average score for student perception of the importance of preventative medicine education was **greater than 7.5/10**
  - **No statistical difference in scores** amongst the three cohorts for 19 out of 20 questions.

CONCLUSIONS

- Confidence score suggests a **ubiquitous deficit** in nutritional and exercise education in the current curriculum.
- It appears that the current medical education model **may not be preparing students** for counseling patients regarding nutrition and exercise.

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