

Enhancing Knowledge and Confidence in Patient Counseling Among DNP Students Using a Functional Medicine Integration Approach

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Problem & PURPOSE

- Obesity is a chronic disease affected by several risk factors including health behaviors, stress, genetics, environment, and nutrition.
- Many adults who are obese often have other comorbidities such as heart disease and diabetes.
- Despite the importance of nutrition related to obesity, fewer than half of patients report that their primary care provider (PCP) counsels them regarding nutrition and other lifestyle modifications (Greaney et al., 2020).
- The purpose of this project was to use evidence-based strategies to enhance knowledge and confidence among Doctor of Nursing Practice (DNP) students and faculty in providing patient counseling and education in the primary care setting through a functional medicine approach. Outcomes measured in this study included knowledge and confidence of DNP students and faculty before and after study intervention.

Available Knowledge & Rationale

- Poor diet and eating habits contribute to the development of obesity; some of these habits include eating large amounts of processed or fast foods, eating large portions, and drinking sugary drinks (Bradley et al., 2023).
- A functional medicine approach helps to identify personalized nutrition, utilizes motivational interviewing, and incorporate lifestyle modifications to an individualized treatment plan to help providers and patients have better success with managing obesity (LaGreca et al., 2020).
- PCPs are in an ideal position to incorporate functional medicine into their practice as they frequently interact with patients and are familiar with their history and environment (Vrkatic et al., 2022).

Methods

Context:

- Setting: DNP program at an accredited, private, not-for-profit nursing and health professions college in a large Midwestern city.
- Population: DNP students who were enrolled in either a family nurse practitioner, adult-gerontology primary care nurse practitioner, or adult-gerontology clinical nurse specialist track. Faculty from the program were also invited to participate.

Intervention:

- A self-paced one hour, online introductory course into functional medicine through the Institute for Functional Medicine (IFM).
- The online course was available to participants for 30 days.
- A pre-survey was sent out 10 days prior to the intervention start date and a post-survey was sent out 14 days after the completion of the online module.

Methods Continued

Study of Intervention:

- Pre- and post-surveys included five perceived knowledge questions and five confidence questions.
- The post-survey included one additional question asking participants if they were able to incorporate the Functional Medicine Matrix Tool into practice.
- Pre- and post-surveys were compared to determine if participants incorporated the knowledge acquired from the educational session into their practice of counseling patients through a functional medicine approach and whether their confidence levels increased.

Measures:

- Perceived knowledge scores were evaluated by a five-point Likert Scale.
- Confidence levels were assessed through the C-Scale Instrument of Clinical Confidence (C-Scale) (Grundy, 1993).

Data Analysis

- C-Scale ratings were transitioned to discrete data with 1 pertaining to low confidence and 5 pertaining to high confidence.
- Likert-scale answers were also transitioned to discrete data with 1 pertaining to “strongly disagree” and 5 pertaining to “strongly agree”.
- Paired sample *t*-tests was used to determine if statistical significance exists.
- Aggregate averages were found for each outcome pre- and post-intervention.

Results

Student Scores

- Overall knowledge and confidence scores between pre- and post-surveys for students.

	Pre-Survey		Post-Survey		<i>t</i>	<i>p</i>
	<i>M</i> (<i>n</i> = 4)	<i>SD</i> (<i>n</i> = 4)	<i>M</i> (<i>n</i> = 4)	<i>SD</i> (<i>n</i> = 4)		
Knowledge	3.45	1.294	4.25	0.406	2.04859	0.054933
Confidence	1.7	0.0125	3.2	0.04375	18.9737	0.000027

- Confidence scores demonstrated statistical significance.

Faculty Scores

- Overall knowledge and confidence scores between pre- and post-surveys for faculty.

	Pre-Survey		Post-Survey		<i>t</i>	<i>p</i>
	<i>M</i> (<i>n</i> = 3)	<i>SD</i> (<i>n</i> = 3)	<i>M</i> (<i>n</i> = 3)	<i>SD</i> (<i>n</i> = 3)		
Knowledge	3.4	0.7439	4.268	0.18912	3.84	0.0092
Confidence	1.736	0.02178	2.736	0.02178	0	0

- Knowledge scores demonstrated statistical significance.
- Confidence scores resulted in an undefined *t*-test.

Results Continued

Functional Medicine Matrix Tool Use

Participant Group	Response	Frequency (<i>n</i>)	Percentage (%)
Students (<i>n</i> = 4)	Yes	4	100%
	No	0	0%
Faculty (<i>n</i> = 3)	Yes	1	33.3%
	No	2	66.7%

- All four students and one of three faculty members utilized the tool in practice.

Discussion

- When evaluating the pre- and post-surveys, there was an overall improvement in knowledge and confidence scores among both students and faculty, however, statistical significance was achieved for overall student confidence and overall faculty knowledge scores.
- Limitations of the project include the small sample size and being performed at just one study site.
- Greater exposure to functional medicine allows providers to approach patients with a different perspective and create a more individualized treatment plan
- Incorporating functional medicine into primary care can lead to fewer repeat visits and reduced long-term medication use (Bland et al., 2017).
- With potential reduced costs in the future for healthcare systems and patients, there would be an upfront cost for DNP programs adding functional medicine courses to their curriculum.

Conclusions

- This project can encourage participants to further their learning and training in functional medicine
- The introduction to functional medicine course is a way for participants to become exposed to functional medicine as well as building knowledge and confidence, however due to the complex and changing nature of functional medicine, it requires additional training, education, and experiences to become proficient in practice.
- Providers with functional medicine training may be able to approach patients differently, potentially resulting in better patient outcomes.

References



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