



# The Living Well Center: A pilot study of a lifestyle medicine program in patients with musculoskeletal disorders

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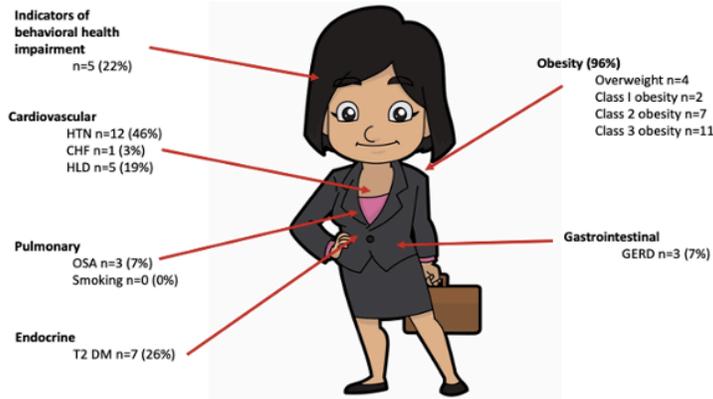
## Objectives

Lifestyle medicine utilizes a multidisciplinary approach to manage both medical and psychosocial barriers to wellness. The primary aim of this study was to assess the feasibility of this approach to care in patients presenting with musculoskeletal disorders. The secondary aim included characterization of patient goals, program usage, and symptomatic improvement.

## Design

Patients were referred from the orthopedic department of a tertiary care academic medical center for consultation with a lifestyle medicine program physician. Treatment goals, demographics, and physical and behavioral health Patient-Reported Outcomes Measurement Information System (PROMIS) measures were collected at baseline and re-assessed at discharge. Descriptive analysis was performed regarding patients' treatment goals, program usage, and symptom changes.

**Results:** 26 patients with a mean age of 58 years (range 21-78 years) were enrolled in the program between 11/2018 and 6/2020. Nineteen were enrolled with a primary spine diagnosis (lumbosacral radiculopathy (n=12), lumbar spondylosis (n=4), lumbar spinal stenosis (n=1), and/or myofascial back pain=2), and 10 were enrolled with symptomatic osteoarthritis (knee (n=6), hip (n=3), and tarsometatarsal (n=1)). Patients also had multiple comorbidities, depicted below:



	Admission Mean (95% CI)	6-weeks Mean (95% CI)	p	Mean (95% CI) score change
PROMIS Anxiety	55.9 (52-59.7)	51.8 (47.4-53.6)	.005*	4 (1.3-6.8)
PROMIS Depression	50.6 (46.6-54.6)	49.7 (45.7-53.6)	0.247	0.9 (-.16-3.5)
PROMIS Pain Interference	63.8 (61.8-65.7)	62.1 (58.9-65.3)	0.144	1.6 (-1.2-4.5)
PROMIS Physical function	35.4 (32.6-38.2)	37.4 (34-40.2)	0.156	-2.0 (-5.7-1.7)

## Results (continued)

At analysis, 19/26 patients had discharged. The average number of total visits was 8.2 (95% CI 6.6 – 9.7; SD 2.4, range 0-6;), over an average of 115 days (95% CI 86 - 145). In addition to their visits with the program physiatrist, patients worked with other professionals with an average of 2.8 visits overall (SD 3.6, range 2-6). A total of 89% (17/19) of patients worked with the psychologist, 94% (18/19) received acupuncture, 89% (17/19) participated in nutrition counseling, 73% (14/19) received massage therapy, and 86% (16/19) engaged in physical therapy. There was a statistically significant reduction of PROMIS Anxiety score (-4 points; p=0.05) (see table).

## Conclusion

This pilot study demonstrated overall feasibility of a lifestyle medicine program for musculoskeletal disorders. On average, physical function and anxiety symptoms improved by a clinically meaningful degree, and nearly half of discharged patients met their goal. Refinement of patient selection may further optimize the success rate of such a program.

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