

The Impact of a Fatigue Relief Intervention on Pain and Sleep Disturbances in HIV+ Latinx Individuals

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BACKGROUND

- Human immunodeficiency virus (HIV) is a disease causing immunodeficiency and autoimmune inflammation in every system of the body.
- Fatigue is a widely known source of morbidity in individuals with HIV, yet there are few studies examining fatigue in this population.
- Previous research notes that pain and sleep disturbances are prevalent comorbidities and side effects of both HIV and chronic fatigue.
- In the present study, we examined the relations between levels of fatigue, pain, and sleep patterns in ageing HIV+ Latinx individuals before and after an intervention to provide insight on how outcomes may be impacted.

OBJECTIVES

- Understand how an intervention for fatigue relief impacts both fatigue levels and other related outcomes.
- Understand how pain and sleep disturbances impact fatigue outcomes.

METHODS

Data: The study was conducted through a series of categorical surveys, interviews, and focus groups to collect data on fatigue, pain, sleep patterns, and other outcomes relating to health & well-being.

Statistical Analysis: Our analyses focused on the 25 participants of a fatigue relief intervention. We analyzed our data with the following outcomes in mind:

- Levels of Fatigue
- Levels of Pain
- Sleep Patterns

Bivariate Correlations to find relationships between covariates
Independent Sample T-tests and Chi² to compare the differences between variables (continuous and categorical) at baseline and follow up.

Backward Linear Regressions to identify predictors of the outcome of interest, Fatigue.

RESULTS

Figure 1: Pain and Fatigue Correlates

Q: Fatigue Interferes with Physical Activity

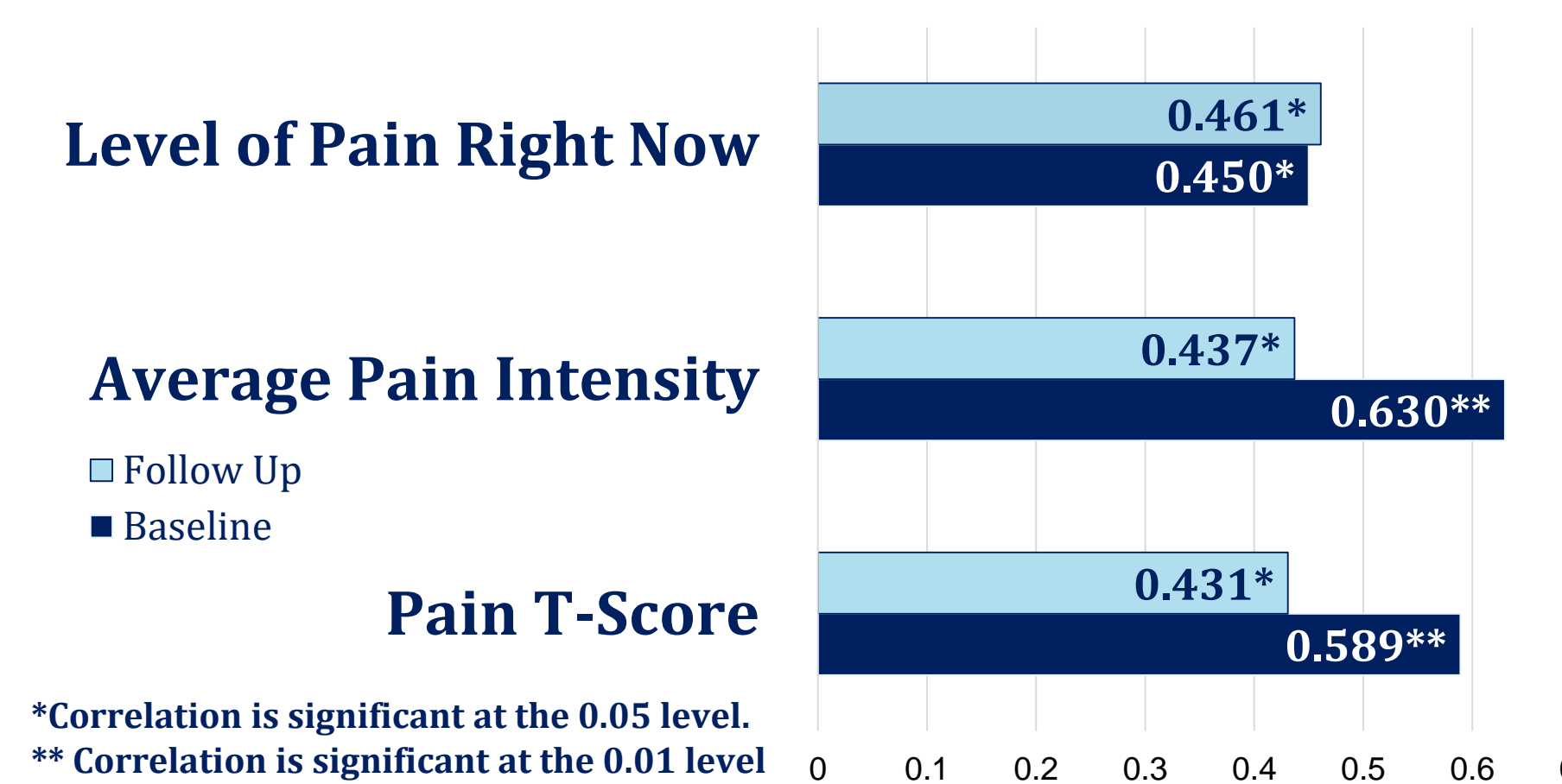


Table 1: Sample Demographics N=25

Variable	Value
Age	Median: 63, R: (52-76)
Gender	20 Females
Annual Income	\$10,000-20,000
Years Receiving HIV Care	Median: 20 Years
Education	Less than high school 52%

Table 3: Backward Linear Regression

Outcome	Baseline		Follow-up	
	Unstd. Beta (β)	Conf. Interval	Unstd. Beta (β)	Conf. Interval
Fatigue T-score				
Pain T-score	0.807*	[-1.54-2.11]	0.070	[.935-.612]
Average Pain Intensity	6.169*	[2.88-9.91]	0.747	[-.401-3.09]
Quality of Life	4.993*	[-1.57-10.19]	-1.960	[-1.35-3.13]
Social Satisfaction	-3.538*	[-5.60-.820]	0.053	[-2.39-2.26]
Depression T-score	-0.125	[-.300-.539]	0.347*	[.172-.630]
Sleep T-score	0.048	[-.499-.687]	0.263*	[.132-.647]
Social Obligations	-0.882	[-3.92-2.64]	3.797*	[.426-3.93]
Bothered by Emotions	-0.661	[-5.06-2.47]	3.135*	[-2.59-3.25]
Restless Sleep	-0.983	[-4.26-1.80]	5.206*	[-.584-5.57]
Hard to Sleep	1.080	[-1.18-3.49]	-3.165*	[-.389- -.647]

β: Unstandardized Beta *Correlation is significant at the 0.05 level

Table 4: Independent Samples T-Test

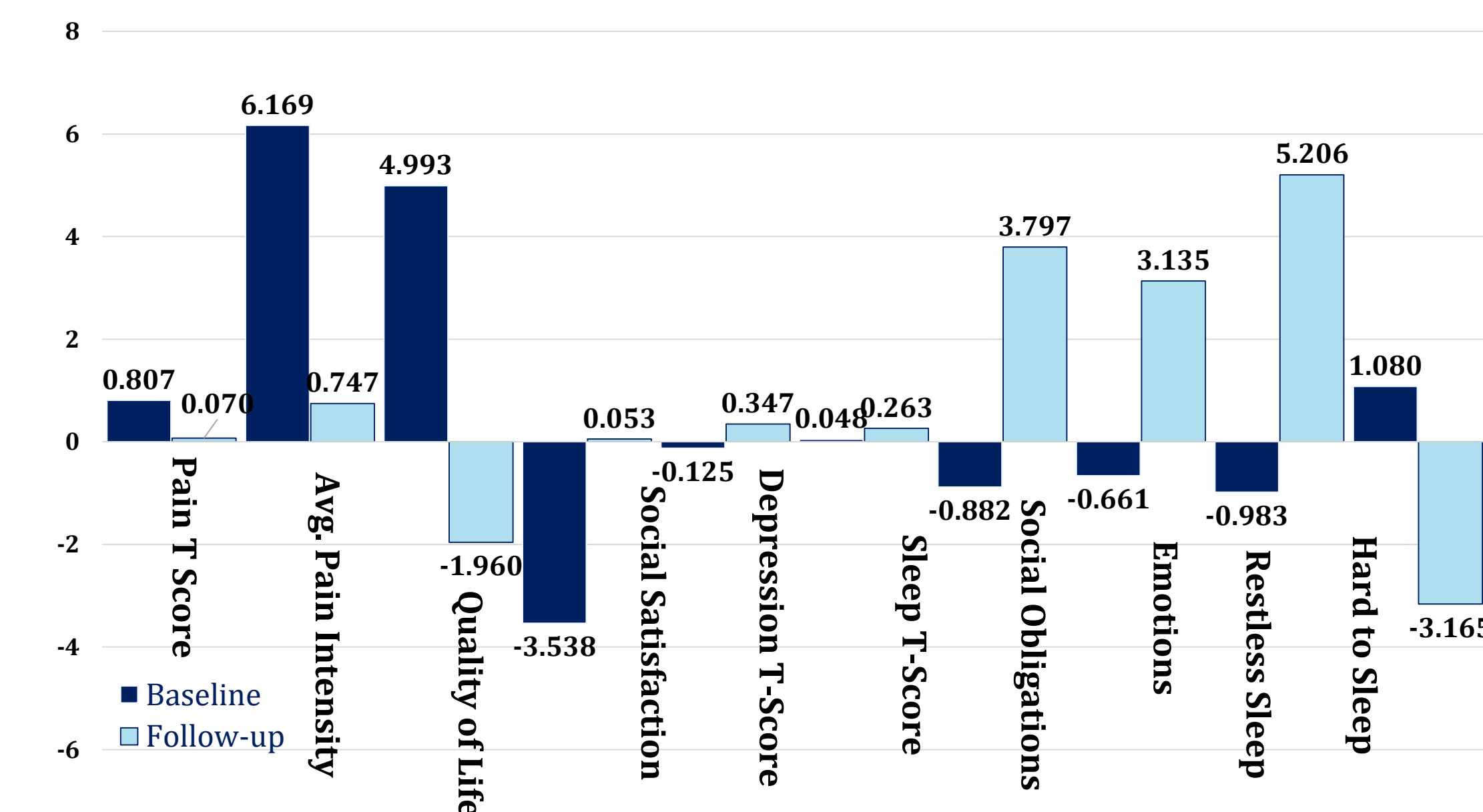
Variable	Group	Mean	T-Score	DF	Conf. Interval
Fatigue T-Score	Baseline	57.18	2.287*	48	[.575-8.93]
	Follow-Up	52.44			
Depression T-Score	Baseline	56.90	.463	48	[-3.81-6.09]
	Follow-Up	55.76			
Pain T-Score	Baseline	52.82	.556	48	[-3.18-5.61]
	Follow-Up	51.60			
Sleep T-Score	Baseline	55.04	-.330	48	[-6.38-4.58]
	Follow-Up	55.94			

Table 2: Pain and Fatigue Cross Tabulations

Q: Fatigue Interferes with Physical Activity	Pain T-Score	Average Pain Intensity	Level of Pain Right Now
Pearson Chi ²	101.264	36.309	28.397
DF	72	16	16
Significance	0.013*	0.003*	0.028*

*The association between two variables is statistically significant if Asymptotic Significance (2-sided) < 0.05

Figure 2: Regression Coefficients for Baseline and Follow-Up Across Dimensions of a Fatigue Relief Intervention



CONCLUSIONS

- Our findings indicate that overall fatigue was considerably lower at follow up than baseline. Other related outcomes at baseline and follow up remained essentially the same. However, several of these other related outcomes were direct contributors to fatigue at either baseline or follow up.
- Given that HIV and fatigue management in the ageing Latinx population is relatively understudied, it is important to further explore the implications of pain and sleep disturbances as contributing factors to these adverse outcomes.
- The intervention was a series of educational sessions on energy conservation which showed to be successful in improving overall fatigue, but the present study also helped identify that pain, sleep, and depression are still being negatively impacted by their condition. It is imperative that future interventions of fatigue management include components that address the aforementioned factors that can improve the overall condition and quality of life.

Limitations & Future Directions:

- Greater sample size, especially recruiting more men to gain a better understanding of what unique needs and gender disparities exist.
- More in depth questions, utilize qualitative data, like focus groups and interviews, to supplement quantitative data.