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Exploring the Influence of the Peer Educator Role on Physical Activity, Exercise Patterns, Physical Fitness, Daily Functioning, and Health Harming Habits in People Living with HIV



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Introduction

- With the advent of standardized care and treatment, HIV has become a chronic disease in which people living with HIV (PLHIV) are living much longer¹
- HIV positive status is associated with earlier onset and frequency of co-morbidities, such as type-2 diabetes, cardiovascular disease, and obesity, which are also associated with sedentary lifestyles³
- Regular physical activity is a health promotion behavior that can prevent and/or mitigate the onset and severity of chronic disease
- Recent meta-analyses have linked exercise to improved cardio-respiratory fitness in PLHIV²
- PLHIV exercise on average 1.4 hours per week, 0.7 hours less than general U.S. population; PLHIV may have increased risk factors for morbidities associated with sedentary lifestyle⁴
- Peer educators play a significant role in HIV care and treatment settings to facilitate health promotion by encouraging positive changes in attitudes and behavior

Research Questions

- RQ1:** Do PLHIV who are peer educators have increased physical activity and physical fitness as compared to their non-peer educator counterparts?
- RQ2:** Are there differences in the CD4 and viral load counts between peer educators and non-peer educators?
- RQ3:** Is there an association between peer educator status and health harming habits such as tobacco use?
- RQ4:** Is there an association between peer educator status and anxiety and depression scores?



<https://www.squirrelandthebee.com/wp-content/uploads/2017/01/exercise-blog-pic.jpg>

Specific Aims

- To investigate the differences in physical activity, exercise patterns, and physical fitness between PLHIV who are peer educators and PLHIV who are non-peer educators
- To explore measures of physical and mental health as well as tobacco and substance use, which will assess the daily functioning and health harming habits of PLHIV who are peer educators as compared to PLHIV who are non-peer educators



Methods

Design: Observational cross sectional study as a part of an International Nursing Network for HIV/AIDS research initiative

Setting: ODU Monarch PT Clinic on the ODU campus and The Center for Comprehensive Care of Immune Deficiency at EVMS

Sample: N=51, males (n=25), females (n=21), transgender females (n=4), and transgender males (n=1); peer educators (n=30) and non-peer educators (n=21)

Inclusion Criteria: Greater than 18 years, diagnosed with HIV, can understand spoken English

Exclusion Criteria: Medical contraindication for exercise, unable to be physically active without assistive devices, use of supplemental oxygen, history of MI or unstable angina within the past month

Method: Demographic and self report surveys, vital signs, anthropomorphic assessments, muscle strength, flexibility and six minute walk test, and medical record data abstraction

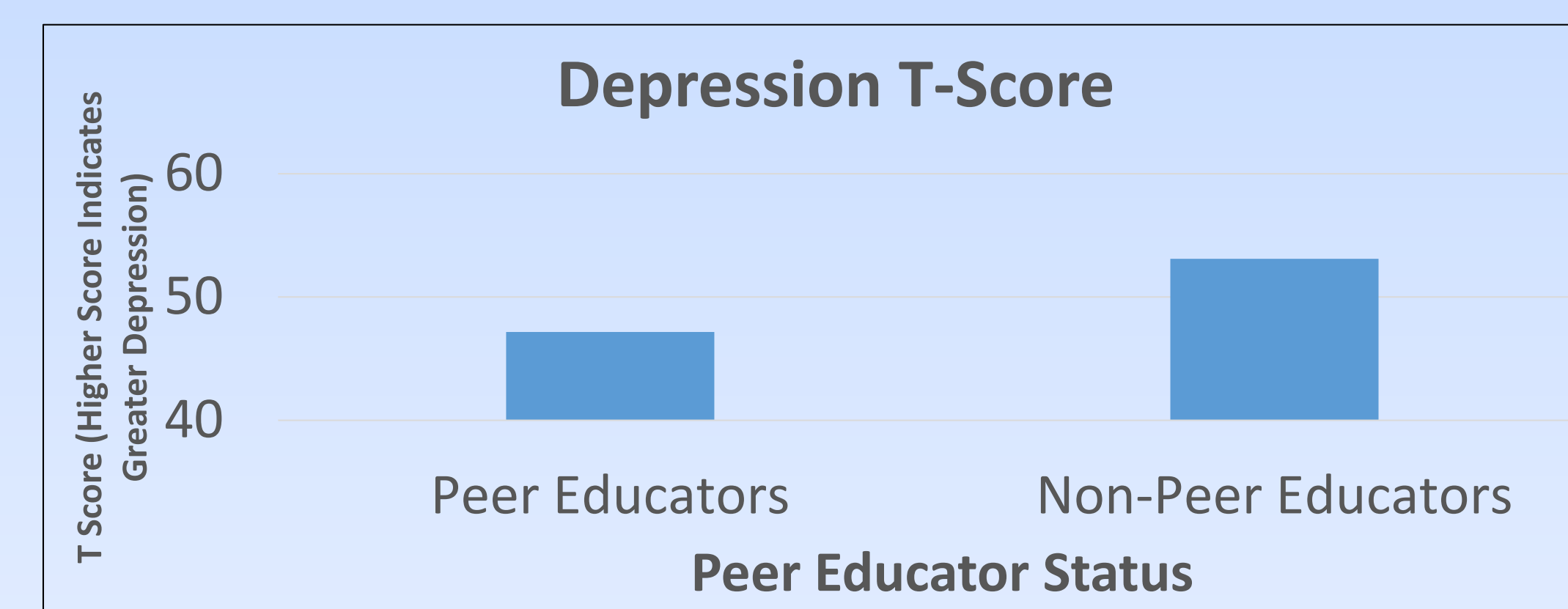
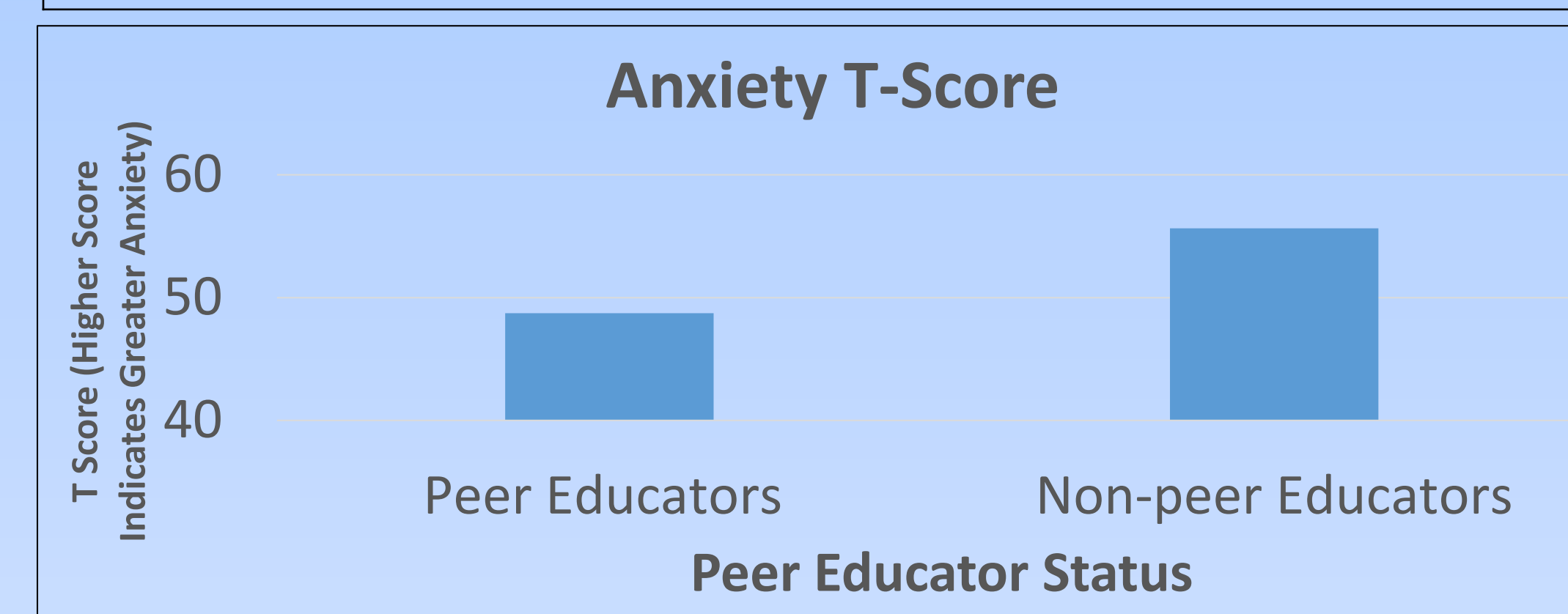
Instruments: Demographics Survey, Promis 29 Scale, Substance Use Scale, Seven Day Physical Activity Recall, Chart Abstraction of HIV Characteristics

Analysis: Utilized descriptive, correlational, and comparative analyses to describe; 1) the sample, 2) any relationships between variables, and 3) mean differences between the two groups

Preliminary Results

	Peer Mean (SD)	Non-Peer Mean (SD)	p-value
Light Activity (Total minutes in one week)	340.83 (418.8)	287.33 (379.3)	0.32
Moderate Activity (Total minutes in one week)	296.30 (576.0)	258.57 (403.1)	0.4
Vigorous Activity (Total minutes in one week)	83.93 (149.2)	57.14 (125.5)	0.25
Distance Walked (Meters in six minutes)	411.76 (118.7)	386.59 (97.7)	0.22
CD4 Count	719.93 (314.7)	693.26 (201.4)	0.37
Anxiety T-Score	48.73 (9.4)	55.64 (10.5)	0.009
Depression T-Score	47.17 (8.0)	53.10 (8.0)	0.006

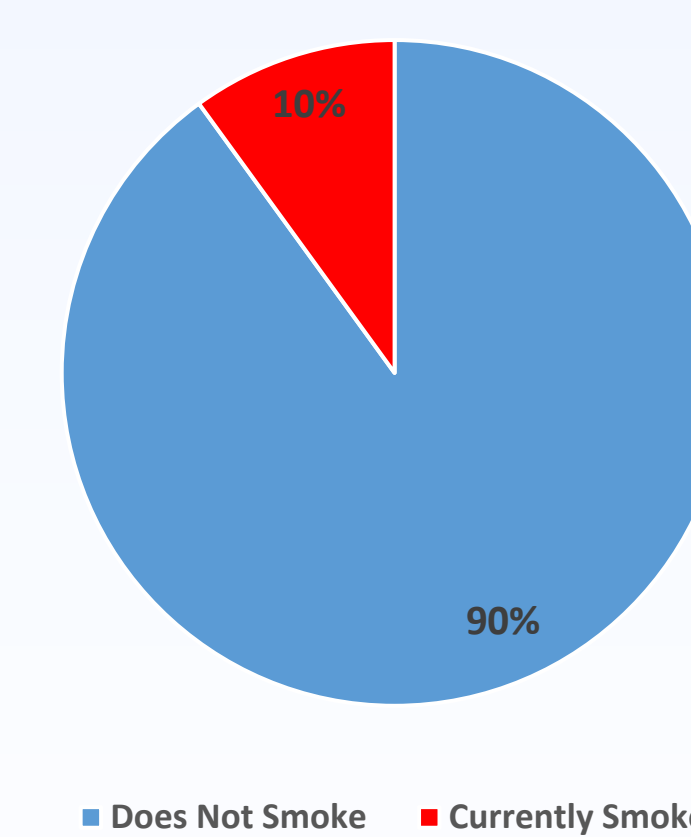
* $\alpha \leq 0.05$



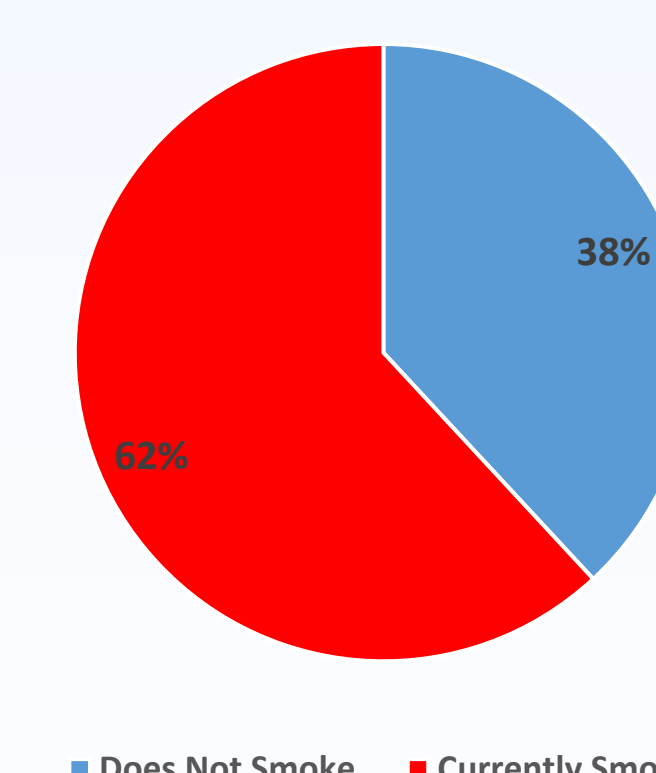
	Peer N (%)	Non-peer N (%)	p-value	
Viral Load	20 and below	22 (81.48)	14 (73.68)	0.3
	Above 20	5 (18.52)	5 (26.32)	
Smoking Now	No	27 (90)	8 (38.10)	< 0.001
	Yes	3 (10)	13 (61.90)	

* $\alpha \leq 0.05$

Smoking Patterns of Peer Educators



Smoking Patterns of Non-Peer Educators



Discussion

- Preliminary findings show a significant correlation between PLHIV peer educator status and decreased anxiety, depression, and tobacco use when compared to non-peer educators (p=0.009, 0.006, & p<0.001)

Discussion (Cont.)

- PLHIV peer educators had a longer average distance walked than PLHIV non-peer educators in the six minute walk test (p=0.22)
- Average minutes of exercise (light, moderate, and vigorous) in a seven day period were also higher in PLHIV peer educators when compared to PLHIV non-peer educators (p=0.32, 0.4, & 0.25)
- Average CD4 counts of PLHIV peer educators were higher than PLHIV non-peer educators (p=0.37)

Conclusion

- The results of this preliminary study indicate that there are correlations between peer educator status among PLHIV and measures of physical fitness, physical activity, anxiety, depression, viral load, CD4 count, and health harming habits
- Generalizability of results is limited due to sample size
- PLHIV peer educators with a longer period of time since HIV diagnosis may be more likely to be peer educators, however the progression of disease over time may affect physical activity, exercise patterns, and physical fitness capacity
- Future studies will include larger samples and examine any associations between length of time since HIV diagnosis and peer educator status, physical activity, exercise patterns, and physical fitness.

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