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 longer.
- 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 lifestyles.
- Regular physical activity is a health promotion behavior that can prevent and control the onset and severity of chronic disease.
- Recent meta-analyses have linked exercise to improved cardio-respiratory fitness in PLHIV.
- 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 lifestyle.
- 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 enhancing habits such as tobacco use? How does this impact on health outcomes?

RQ4: Is there an association between peer educator status and anxiety and depression scores?

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 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.

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.
- To study 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.

Preliminary Results

<table>
<thead>
<tr>
<th>Physical Activity and Physical Fitness Patterns, Mental Health Measures, and CD4 Count</th>
<th>Peer Mean (SD)</th>
<th>Non-Peer Mean (SD)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Light Activity (Total minutes in one week)</td>
<td>340.83 (416.8)</td>
<td>267.33 (379.3)</td>
<td>0.32</td>
</tr>
<tr>
<td>Moderate Activity (Total minutes in one week)</td>
<td>296.36 (575.6)</td>
<td>258.57 (605.1)</td>
<td>0.4</td>
</tr>
<tr>
<td>Vigorous Activity (Total minutes in one week)</td>
<td>83.93 (149.2)</td>
<td>57.14 (123.5)</td>
<td>0.25</td>
</tr>
<tr>
<td>Distance Walked (Meters in one week)</td>
<td>416.71 (118.7)</td>
<td>386.59 (97.7)</td>
<td>0.22</td>
</tr>
<tr>
<td>CD4 Count</td>
<td>719.93 (314.7)</td>
<td>693.26 (201.4)</td>
<td>0.37</td>
</tr>
<tr>
<td>Anxiety T-Score</td>
<td>47.72 (10.1)</td>
<td>53.97 (8.0)</td>
<td>0.006</td>
</tr>
<tr>
<td>Depression T-Score</td>
<td>47.72 (10.1)</td>
<td>53.97 (8.0)</td>
<td>0.006</td>
</tr>
</tbody>
</table>

Discussion

- PLHIV peer educators had a longer average distance walked than PLHIV non-peer educators in the six minute walk test (p=0.02).
- 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=0.02; 0.4; and 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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References