Fatigue, Quality of Life, Physical Function and Participation in Social, Recreational, and Daily Living Activities in Women Living with HIV: a Descriptive Study

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HIV and Aging
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Impact of HIV-Related Fatigue

- Relationships between fatigue and psychological factors (Barroso, Carlson & Meynell, 2003; Jong et al., 2010)
- Restriction in activities of daily living (ADLs) (Rusch et al., 2004)
- Limitations in complex role functioning (Crystal et al., 2000)
- Decreased quality of life (QoL) (Sama et al., 1999; Safren et al., 2012)

Limited research specific to women with respect to the impact of HIV (and the related fatigue) on:
- QoL
- Physical function
- ADLs and participation
Purpose:

To describe the impact of fatigue on quality of life, participation in social/recreational activities, ADLs, and physical function in women with HIV
Procedure

Recruit

HARS: discussed study procedure on phone and arranged meetings at Bethel Church

CIOC: approach clients during their medical appointments and explain study

Paperwork

Informed consent and 4 questionnaires (demographics, HRFS, MOS-HIV, lists of activities) administered in the gym at Bethel

Informed consent and 4 questionnaires (demographics, HRFS, MOS-HIV, lists of activities) administered in CIOC treatment room

6-Minute Walk Test

Participants walked around the gymnasium at Bethel Church

Participants walked up and down a long corridor in Hotel Dieu Hospital
### Demographics

<table>
<thead>
<tr>
<th>Number of Participants</th>
<th>15</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years) (mean±SD, range)</td>
<td>44±8 (30, 56)</td>
</tr>
<tr>
<td>Duration of HIV infection (years) (mean±SD, range)</td>
<td>12±5 (5, 23)</td>
</tr>
<tr>
<td>Number of Participants using ARVs</td>
<td>14</td>
</tr>
<tr>
<td>Duration of therapy use (years) (mean±SD, range)</td>
<td>9±3 (4, 15)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CO-MORBIDITIES</th>
<th># of participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Musculoskeletal (muscle, bone)</td>
<td>5</td>
</tr>
<tr>
<td>Cardiorespiratory (heart, lung, blood vessels)</td>
<td>10</td>
</tr>
<tr>
<td>Mental Health</td>
<td>8</td>
</tr>
<tr>
<td>Neural</td>
<td>3</td>
</tr>
<tr>
<td>Other</td>
<td>7</td>
</tr>
<tr>
<td>MEDICATIONS (# of participants)</td>
<td></td>
</tr>
<tr>
<td>---------------------------------</td>
<td>--</td>
</tr>
<tr>
<td>Vitamins and Supplements</td>
<td>10</td>
</tr>
<tr>
<td>Psychogenic</td>
<td>6</td>
</tr>
<tr>
<td>Cardiorespiratory</td>
<td>7</td>
</tr>
<tr>
<td>Gastrointestinal</td>
<td>2</td>
</tr>
<tr>
<td>Anti-inflammatory</td>
<td>2</td>
</tr>
<tr>
<td>Pain</td>
<td>5</td>
</tr>
<tr>
<td>Other</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>EMPLOYMENT (# of participants)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Working full-time</td>
<td>4</td>
</tr>
<tr>
<td>Working part-time</td>
<td>3</td>
</tr>
<tr>
<td>On Disability</td>
<td>7</td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HIGHEST EDUCATION COMPLETED (# of participants)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Elementary School</td>
<td>1</td>
</tr>
<tr>
<td>Secondary School</td>
<td>7</td>
</tr>
<tr>
<td>Post-secondary School</td>
<td>7</td>
</tr>
</tbody>
</table>
HIV-Related Fatigue Scale

Standardized Questionnaire

First section, 7 questions

- Questions #1-5 → scale of 1 to 10
- Questions #6 & 7 → scale of 1-4
- If answer, ≤ 2 all questions, then no fatigue and person does not complete the rest of the form
- If answer, ≥ 3, then complete the rest of the questionnaire

Second Section, Questions 8 – 56

- Indicate response on a scale of 1-10 or 1-7
HIV-Related Fatigue Scale

N=15 participants

N=7
Responded ≤2 to Questions 1-7
NON-FATIGUED

N=8
Responded ≥3 to Questions 1-7
FATIGUED

If responded ≥5/7 or ≥7/10
SEVERE IMPACT OF FATIGUE
HIV-Related Fatigue Scale

Examples of Severity Rating

In the past week, to what degree has fatigue interfered with your ability to do household chores?

1  2  3  4  5  6  7  8  9  10
Not at all                       a great deal

My motivation is lower when I am fatigued.

1  2  3  4  5  6  7
Completely disagree             Completely agree
Severe Impact of Fatigue on ADLs

- Interferes with Carrying out Duties
- Prevents Sustained Phys Func
- Interferes with Phys Func
- Plan activities ahead
- Exercise
- Walk
- Shop/Errands
- Work
- Dress
- Bathe/Wash
- Cook
- House chores

# of participants

0 1 2 3 4 5 6 7 8

# of participants
Fatigue: Severe Interference with Socialization

- work, family & social life
- ability to interact with people outside home
- ability to control temper
- ability to engage in leisure/rec activities
- Engagement in sexual activity
- Visiting/socializing with friends/family

Fatigue: Severe Impact on Mental Health

- difficulty concentrating
- Learn new things
- Think quickly
- Think clearly
Triggers of Fatigue

- Heat
- Inactivity
- Stress
- Depression
- Work
- ADLs

Alleviators of Fatigue

- Resting
- Sleeping
- Cool temperature
- Positive experiences
Descriptors of Fatigue

- Unpredictable: 3
- Eat less: 2
- Drowsy: 4
- Lose patience: 5
- Low motivation: 6
- Worse in afternoon: 5
- Worse in morning: 1
- Started before other symptoms: 4
- Most disabling symptom: 4
- Among 3 most disabling: 3
- Makes other symptoms worse: 3
- Different in qual/sev before HIV: 2

# of participants
Quality of Life (MOS-HIV)

**CONTENT**

- Standardized questionnaire
- 35 questions
  - Check off response to question
  - 1-6; all of the time→none of the time
  - yes/no

  **Example:** *How much bodily pain have you generally had during the past 4 weeks?*
  - None 1
  - Very mild 2
  - Mild 3
  - Moderate 4
  - Severe 5
  - Very Severe 6

**SCORING**

- transformation scoring system:
  - 11 sub-scales
    - General health perceptions
    - Pain
    - Physical Function
    - Role Function
    - Social Function
    - Energy/fatigue
    - Mental Health
    - Cognitive function
    - Quality of life
    - Health Transition
  - 2 summary scores
    - Physical Health Summary
    - Mental Health Summary
Quality of Life (MOS-HIV)

- Non-Fatigued
- Fatigued

Graph showing quality of life metrics for non-fatigued and fatigued individuals.
### Lists of Activities

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th># OF PARTICIPANTS</th>
<th>ABLE TO DO/NOT TIRED</th>
<th>LIMITED/TIRED</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Social</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Socializing with friends</td>
<td>8</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td><strong>Recreational</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Going for a walk</td>
<td>11</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td><strong>Activities of Daily Living</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grocery shopping</td>
<td>10</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>Cleaning</td>
<td>9</td>
<td>5</td>
<td>4</td>
</tr>
</tbody>
</table>
Fatigued % of predicted distance on 6MWT

Non-fatigued 80% 77%

% of predicted distance on 6MWT
Primary Findings & Clinical Relevance

• ½ of the women with HIV/AIDS in our study encountered some level of fatigue

• Individuals with fatigue
  • reported lower quality of life
  • Had greater limitations in activities

• Since the demographics of our sample were similar to that in the OHTN Cohort Study,
  • our data suggest that interventions should be developed to address fatigue in women with HIV to enhance their quality of life and improve their participation in daily activities
Acknowledgments

Thank you to:
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• Tracey Stevenson, Jenna Ekborn and other CIOC staff for their patience and assistance in this project
• John Mactavish and HARS for their support in providing compensation and for referring clients to the study
• The staff at Bethel Church for their support and for allowing the use of the facility for data collection
• Dr. Julie Barroso from Duke University for her assistance with the HRFS
Relationship between Measured versus Reported Physical Function

$r=0.69, \ p=0.006$

Where, $r=0$, no relationship  
$r=1.0$, strong relationship