Perceived Discrimination is Related to Emotional/Psychological and Physical Symptoms in Sickle Cell Disease

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Problem

- Perceived discrimination
  - Psychological stressor
  - Related to negative health outcomes in both healthy and patient populations \(^{1-3}\)

- Little known: Relationship between perceived discrimination and emotional/psychological and physical symptoms in adult patients with sickle cell disease (SCD)
Background

- Americans with SCD are **vulnerable** to the negative **influence** of perceived discrimination:
  - **Historical** and contemporary exposure to discriminatory practices
  - **Majority** of patients with SCD are people of **African** or Hispanic descent
To determine the relationship between perceived discrimination, and emotional/psychological (perceived stress, anger, anxiety, and depression) and physical (pain and fatigue) symptoms in patients with SCD.
Guided by the model of perceived unfairness (MPU)

The MPU: Perception of unfairness, such as perceived discrimination, could initiate stress responses, which may accumulate to negatively affect health.
Hypothesis

- **Compared** to patients with SCD who did not report the experience of perceived discrimination, those who did would be **more likely** to report greater **emotional/psychological** (perceived stress, anger, anxiety, and depression) and **physical** (pain, and fatigue) symptoms.
Study Design

- Descriptive comparative study
Sample Characteristics

- Sample: 54 adults with SCD
- Mean age: 36±11 years
  - [Range: 22-74 years]
- 96% African Americans
- 57% women
Measures

- PAINReportIt©
  - Computerized pain measure (pain intensity)
- Demographic questions
Measures

- Perceived Discrimination Questionnaire (9-item)
- Perceived Stress Questionnaire (30-item)
- PROMIS measures:
  - Anger (7-item)
  - Anxiety (7-item)
  - Depression (8-item)
Analysis

- Data analyzed using the statistical software R
  - Descriptive
  - Comparative
Results: Descriptive

- Mean scores for the study variables:
  - Perceived discrimination (1.8±0.7)
  - Perceived stress (0.37±0.18)
  - Anger (51.1±12.4)
  - Anxiety (52.9±9.1)
  - Depression (51.6±10.0)
  - Average pain intensity (4.5±2.4)
  - Fatigue (56.5±9.4)
# Results: Comparative

<table>
<thead>
<tr>
<th>Study Variables</th>
<th>Low Discrimination (discrim&lt;=1.5, n=28)</th>
<th>High Discrimination (discrim&gt;1.5, n=26)</th>
<th>p Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived Stress (0-1)</td>
<td>0.30 (0.18)</td>
<td>0.45 (0.15)</td>
<td>.001</td>
</tr>
<tr>
<td>Anger (10-90)</td>
<td>46.4 (13.2)</td>
<td>56.1 (9.3)</td>
<td>.003</td>
</tr>
<tr>
<td>Anxiety (10-90)</td>
<td>49.1 (10.3)</td>
<td>57.0 (5.5)</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Depression (10-90)</td>
<td>47.4 (10.0)</td>
<td>56.2 (8.0)</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Pain Intensity (0-10)</td>
<td>3.6 (2.3)</td>
<td>4.4 (2.3)</td>
<td>.24</td>
</tr>
<tr>
<td>Fatigue (10-90)</td>
<td>53.8 (11.2)</td>
<td>59.4 (6.0)</td>
<td>.03</td>
</tr>
</tbody>
</table>
Conclusions

- Provide **preliminary** evidence:
  - **Relationship** between perceived discrimination, and perceived stress, anger, anxiety, depression, and fatigue in patients with SCD

- **Consistent** with the MPU:
  - Suggest that perceived stress **related** to the experience of perceived discrimination could be the **mechanism** through which perceived discrimination **affects** emotional/psychological and physical symptoms in patients with SCD
Results from future studies in this population will:

- Provide additional evidence to better understand the influence of perceived discrimination on emotional/psychological and physical symptoms in patients with SCD.

- Inform future psychoeducational intervention studies to decrease perceived stress, anger, anxiety, depression, and fatigue in patients with SCD who experience perceived discrimination related to their disease or minority status.


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Questions

Thank you!