Measurement Characteristics and Clinical Utility of the Freezing of Gait Questionnaire in Individuals With Parkinson Disease

Sydney Rozenfeld, Ana Miskovic, BA, Kristian P. Nitsch, MS, Linda Ehrlich-Jones, PhD, RN

Parkinson disease (PD) is one of the most common neurodegenerative conditions and affects >10 million people worldwide.1,2 Freezing of gait (FOG) is a commonly observed symptom in individuals with PD,3 with prevalence rates ranging between 20% and 40%.4,5 The Freezing of Gait Questionnaire (FOGQ) is a 6-item questionnaire used to assess FOG severity in patients with PD.7,8 A 5-point scale, 0 (absence of symptoms) to 4 (most severe), is used for each item to rank symptom severity.7 The FOGQ total score ranges from 0 to 24 (higher scores correspond to more severe FOG), has demonstrated excellent reliability,7,8 and has demonstrated adequate to excellent criterion validity with other PD-specific measurement tools.7,9,10 Additionally, the FOGQ has been shown to be more sensitive in detecting FOG than the Unified Parkinson’s Disease Rating Scale.7 The FOGQ can be administered and scored in <10 minutes, making it a clinically useful and low-burden instrument. The FOGQ is free to use, is available in several languages, and has been recommended by the Neurology Section of the American Physical Therapy Association’s Parkinson’s Taskforce.

This abbreviated summary provides a review of the psychometric properties of the FOGQ in people with PD. A full review of the FOGQ and reviews of nearly 375 other instruments for patients with various health conditions can be found at www.rehabmeasures.org.

Please address correspondence to rehabmeasures@ric.org.

BIBLIOGRAPHY

Freezing of Gait Questionnaire in Parkinson disease

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<tr>
<th>Measure Name:</th>
<th>Acronym:</th>
<th>Authors:</th>
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<td>Freezing of Gait Questionnaire</td>
<td>FOGQ</td>
<td>S. Rozenfeld, A. Miskovic, &amp; K. Nitsch</td>
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**Population Reviewed:** Parkinson’s disease

**Age Range:** Adults: 18 - 64 Years; Elderly Adults: 65+

**Purpose and Administration Instructions:**
- The Freezing of Gait Questionnaire is a clinician-rated instrument used to evaluate freezing of gait (FOG) severity in patients with Parkinson’s disease, unrelated to falls.
- Item responses use a 5-point scale, ranging from 0 (Absence of Symptom) to 4 (Severe).
- Total score ranges from 0 to 24; higher scores correspond to more severe FOG.
- Items 1, 2, 4, 5, and 6 are answered based on experience over the past week or overall FOG during an entire day.

**Required Equipment:** Pencil, FOGQ Form

**Training Required:** No Training Required

**Reliability:**
**Test-Retest (Baseline and 10-week follow up):**
- Placebo Group: Excellent: $(r = 0.83)^8$
- Treatment Groups: Excellent: $(r = 0.84)^8$

**Internal Consistency:**
- Excellent: (Cronbach’s Alpha = 0.94)$^7$
- Excellent: (Cronbach’s Alpha = 0.90)$^8$

**Responsiveness:**
- Item 3 has greater sensitivity (85.9%) for detecting gait freezers than item 14 of the UPDRS (44.1%).$^8$
- 65.3% accuracy in determining probability of falls.$^{11}$

**Professional Association Recommendations:**
- Recommendations for the use of the FOGQ from the Neurology Section of the American Physical Therapy Association’s Parkinson’s Taskforce (PD EDGE). These recommendations were developed by a panel of research and clinical experts using a modified Delphi process.

**Recommendation Guide**

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<th>HR</th>
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<tbody>
<tr>
<td>Highly Recommended</td>
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<td>Reasonable to use, but limited study in target group / Unable to Recommend</td>
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**Recommendations based on Hoehn and Yahr**

<table>
<thead>
<tr>
<th>PD EDGE</th>
<th>I</th>
<th>II</th>
<th>III</th>
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**Recommendations for Entry-level Physical Therapy Education & Research**

<table>
<thead>
<tr>
<th>Students Should Learn to Administer?</th>
<th>Students Should be Exposed?</th>
<th>Appropriate for Intervention Research</th>
<th>Additional Research Warranted?</th>
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<tbody>
<tr>
<td>PD EDGE</td>
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**Cut-off Criteria:**

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<th>r</th>
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<tr>
<td>Excellent</td>
<td>$\geq 0.6$</td>
</tr>
<tr>
<td>Adequate</td>
<td>0.31-0.59</td>
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<tr>
<td>Poor</td>
<td>$\leq 0.3$</td>
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**Floor / Ceiling Effects:**
- Adequate: floor and ceiling effects both less than 5.4%

**Considerations:**
- Item 3 is a good single question for screening FOG frequency.$^8$
- Items provide a classification range for the duration of a FOG episode.$^{12}$

**Abbreviations:**
- ADL: Activities of Daily Living
- ICC: Interclass Correlation
- PDQ-39: Parkinson’s Disease Questionnaire-39
- UPDRS: Unified Parkinson Disease Rating Scale