Figure 3. Composition of Groups for Comparison of Item Difficulty

**STUDY 2**

*Evaluation of Item Difficulty*

Participants drawn from the Initial Participant Pool (Figure 1)

Participants (n = 1,235) invited by mailed questionnaire to respond to new floor or ceiling items and PROMIS PF-10 items for evaluation of item difficulty

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**Ceiling Item Comparison**

(n = 835)

Composed of rheumatoid arthritis and osteoarthritis study participants and participants from studies of healthy aging (n = 632) and ultra-marathoners (n = 203)

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**Floor Item Comparison**

(n = 400)

Composed of rheumatoid arthritis and osteoarthritis study participants and participants from studies of healthy aging (n = 370) and nursing home participants (n = 30)

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Respondents

(n = 637)

Respondents

(n = 246)