



# Katz

## Katz School of Science and Health

# Impact of Migraine Disability on Occupational Roles

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### ABSTRACT

As of 2016, approximately 14.4% of the global population experienced migraine, the second leading specific cause of disability. Migraine significantly impacts work productivity, with individuals reporting reduced capacity for 25% of their workdays, exacerbating economic burdens in low socioeconomic populations. Migraine also strains social relationships and hinders occupational engagement, contributing to psychological distress. With an individual's life roles being heavily influenced by their occupations, examining the link between occupational roles and migraine disability would help bridge the literature gap in this area. Through the Role Checklist version 3 (RCv3) and the Migraine-Specific Quality-of-Life Questionnaire (MSQ) v 2.1, this study sought to establish an association between occupational roles and migraine disability. We found that higher levels of migraine disability may potentially be associated with lower occupational role performance and satisfaction.

### INTRODUCTION

Migraine – the second leading global cause of disability – affects ~14% of the population, causing economic burdens and psychological issues (Burch et al., 2019; Cooper et al., 2020; Fisher et al., 2007).

Migraine disrupts sleep, limits work capacity, and hinders social engagement, affecting executive functions and life participation (Cogan et al., 2019; Plach & Sells, 2013). It may entail memory loss, headaches, and fatigue, causing daily task difficulties and higher dependence (Cogan et al., 2019).

The Occupational Therapy Practice Framework links the concepts of occupations – the meaningful activities that occupy our time – and roles (AOTA, 2020). While migraine has been heavily studied through the neurological lens, there is a need to explore the relationship between migraine in the context of occupations and roles.

We aimed to underscore the intersection of occupational roles and migraine disability. Utilizing the Role Checklist version 3 (RCv3) and the established migraine disability measure, Migraine-Specific Quality-of-Life Questionnaire (MSQ) v 2.1, the research question driving this study was:

**Are occupational roles associated with migraine disability?**

### METHODOLOGY

This cross-sectional clinic-based study analyzed baseline data from a single-arm clinical trial evaluating remote Behavioral Migraine Management (BMM) migraine prevention (NCT03982316 on clinicaltrials.gov), with Einstein IRB approval (2019-10345).

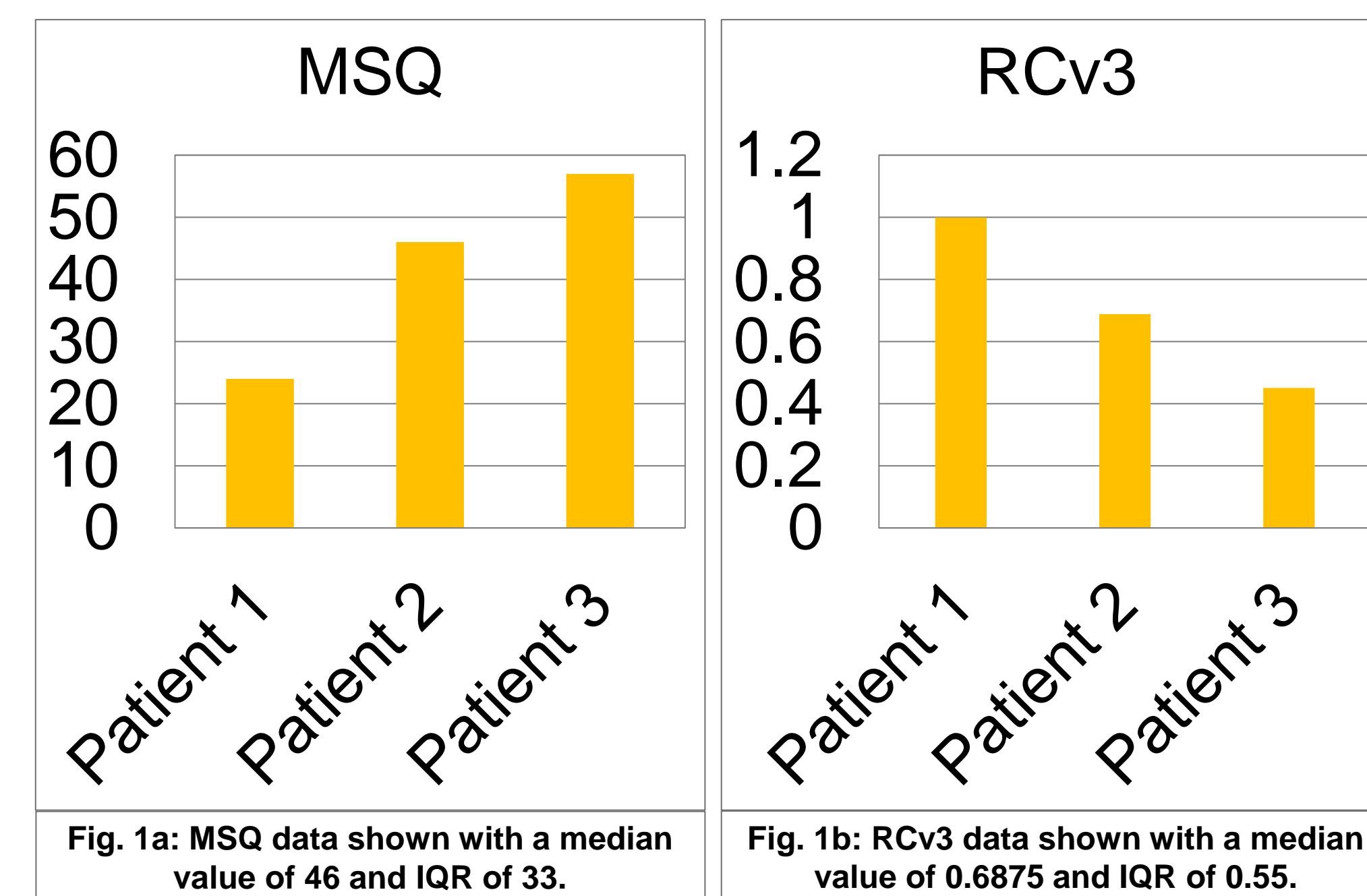
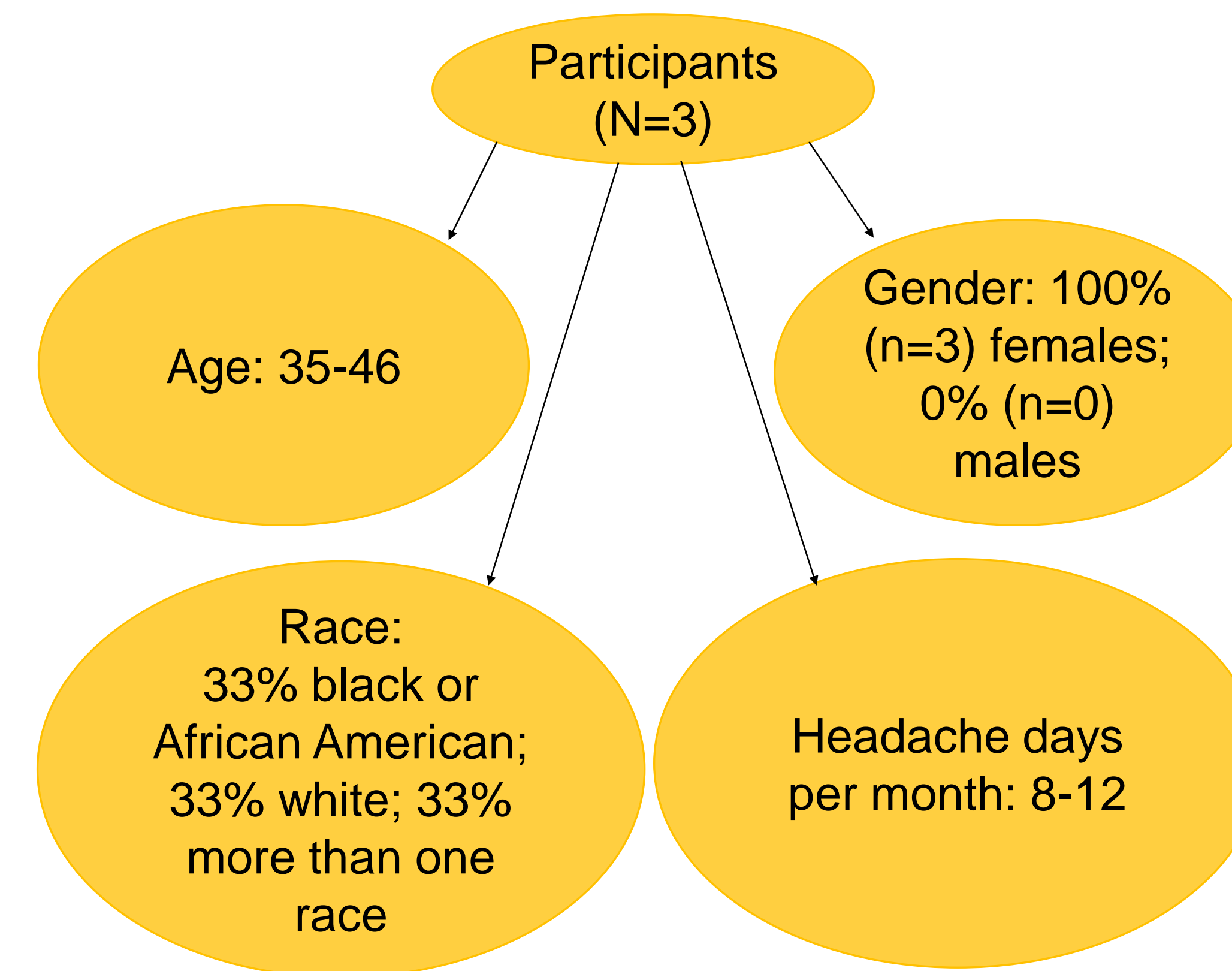
Inclusion criteria	Exclusion criteria
<ul style="list-style-type: none"> <li>physician-diagnosed migraine</li> <li>current migraine symptoms</li> <li>at least 4 migraine symptom days per month</li> <li>aged 18-65</li> <li>English proficiency</li> <li>capacity to consent</li> </ul>	<ul style="list-style-type: none"> <li>psychiatric illness</li> <li>probable medication overuse headache based on prescriptions</li> </ul>

Participants were recruited via convenience sampling from a headache center in New York City. Demographic information was gathered through an intake survey, then participants completed the measures via electronic surveys.

Measure	Description
Migraine-Specific Quality-of-Life Questionnaire (MSQ) v 2.1 (GSK, 1998)	a 14-item survey, measures migraine-related quality of life
Role Checklist version 3: Participation and Satisfaction (RCv3) (Scott, 2019)	assesses occupational role participation levels and satisfaction

Sample characteristics for both measures were described using medians and interquartile ranges (IQR). Demographics were reported and the relationship between the two measures was visually depicted.

### RESULTS



A higher MSQ score indicated a higher level of migraine disability (Figure 1a); a lower RCv3 score indicated a lower level of occupational role performance and satisfaction (Figure 1b).

**Results indicate greater migraine disability was associated with lower occupational role performance and satisfaction.**

### CONCLUSIONS & RECOMMENDATIONS

- Higher migraine disability may be associated with lower occupational role performance and satisfaction.
- Migraine care routinely involves some assessment of occupations in the context of disability.
- OT measures and frameworks may more holistically capture migraine interference with occupational roles and general function in a way that is yet to be explored.

#### Limitations:

- Small sample size - limited generalizability and prevented statistical analyses
- Time constraints - allowed only for baseline data collection

#### Recommendations:

- Migraine is not well studied in occupational therapy literature and the occupational impact has not been explored; future studies should consider evaluating the impact of migraine in relation to occupations and roles.
- Larger sample size increases statistical significance.

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### REFERENCES

American Occupational Therapy Association. (2020). Occupational therapy practice framework: Domain and process—Fourth edition. *American Journal of Occupational Therapy*, 74 (Suppl. 2), 7412410010p1.

Burch, R. C., Buse, D. C., & Lipton, R. B. (2019). Migraine: epidemiology, burden, and comorbidity. *Neurologic Clinics*, 37(4), 631-649.

Fisher, G. S., Emerson, L., Firpo, C., Ptak, J., Wonn, J., & Bartolacci, G. (2007). Chronic pain and occupation: An exploration of the lived experience. *American Journal of Occupational Therapy*, 61(3), 290-302.

GlaxoSmithKline Research and Development Limited (GSK). (1998). *Migraine-Specific Quality-of-Life Questionnaire (MSQ) v 2.1*. Glaxo Wellcome Inc.

Scott, P. J. (2019). *The Role Checklist Version 3: Satisfaction and Performance (RCv3)*. The Model of Human Occupation Clearinghouse.