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# Establishing Test-Retest Reliability and Internal Consistency of the Occupational Resilience Measure

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## Introduction

Without a clear understanding of the dynamic relationship between resilience and occupation, occupational therapy has lacked the tools necessary to optimize resilience in research and clinical practice.

- Occupational resilience is defined as “the capacity for persistence in the performance of an occupation, whereby capacity is reflected in both duration and intensity of engagement in a specified occupation” (Muriithi et al., 2022).
- Occupational Resilience Measure 1.0 (ORM) and the Occupational Resilience Individual Perception Scale (ORIPS) to be used as the primary assessment tools for measuring resilience in individual occupations.

**Aim:** Establish the test-retest reliability and internal consistency of the ORM; establish the test-retest reliability of the ORIPS.

**Purpose:** The results of this study will be used by Dr. Muriithi to substantiate the ORM and ORIPS as reliable assessment tools for future use in occupational therapy practices.

- Establishing psychometric properties of the ORM and ORIPS is an important step for the future clinical and research use of occupational resilience as a new occupational therapy construct.

## Methods

**Design and setting:** Test-retest design; ATSU/Virtual.

**Participants:** English-speaking adults (18+), men and women.

**Procedures:** IRB approval.

- Participants were recruited via snowball (chain-method) sampling.
- The ORM and ORIPS were administered to each participant twice within a two-to-three-week testing interval.
- The statistical analysis was conducted using SPSS version 28 through ATSU under the consultation of a statistician.
- The reliability analysis focused on the following values:
  - Cronbach’s alpha
  - Intraclass correlation coefficient (ICC)
    - 95% confidence intervals
  - Descriptive statistics
  - Pearson correlation coefficients
  - Paired samples *t* test

## Results

### Descriptive Statistics

Occupations (N = 340)

- 89.7% - Positive
- 10.3% - Negative

Gender (N = 94)

- 56.4% - Women
- 43.6% - Men

### Sample:

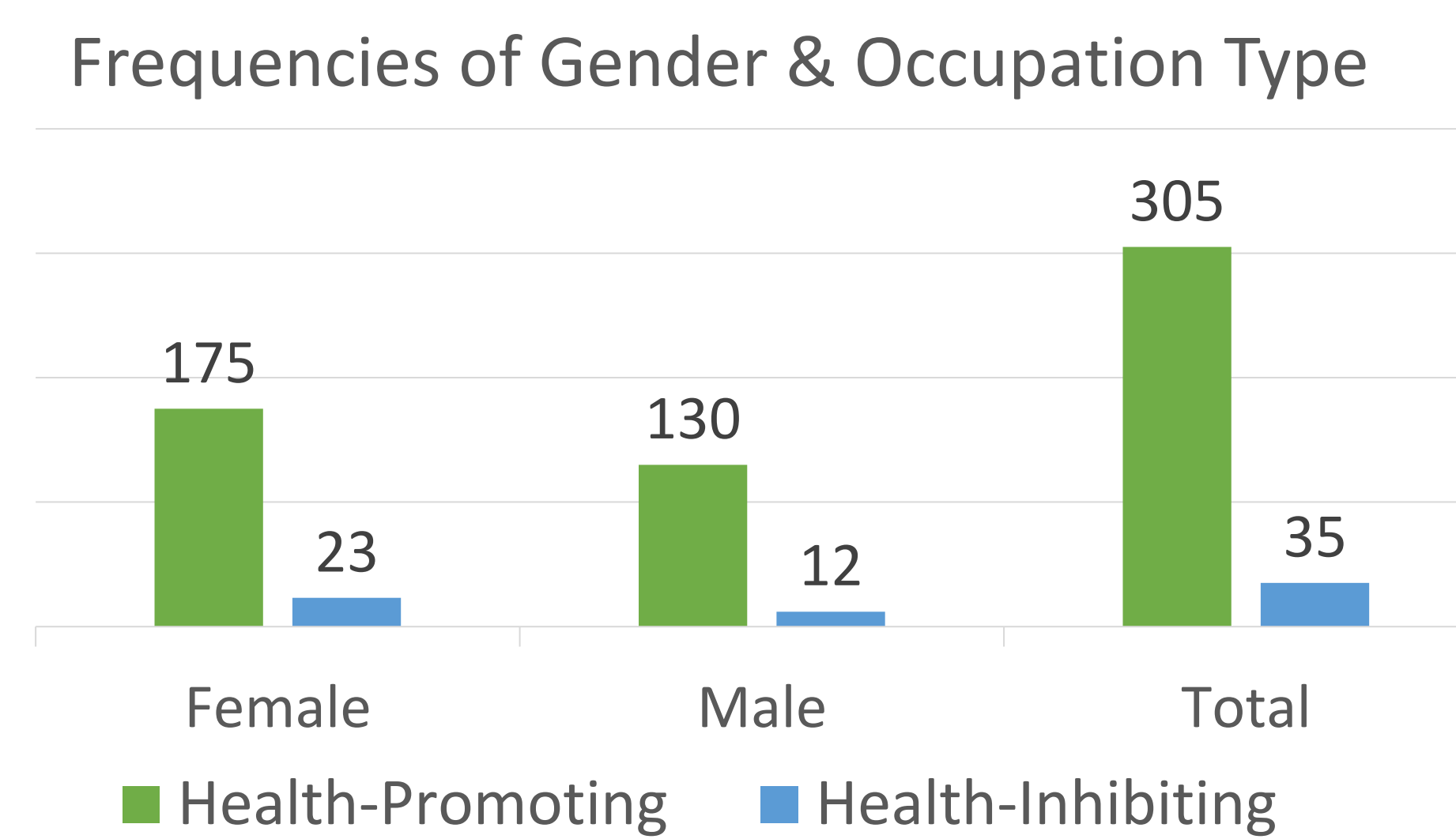
- Range - 19-66 years old
- Mean - 32.46
- Std. Deviation - 12.25

### Cronbach’s alpha for Raw ORM Scores

- Initial - .711
- Retest - .768

### Paired Samples *t*-test

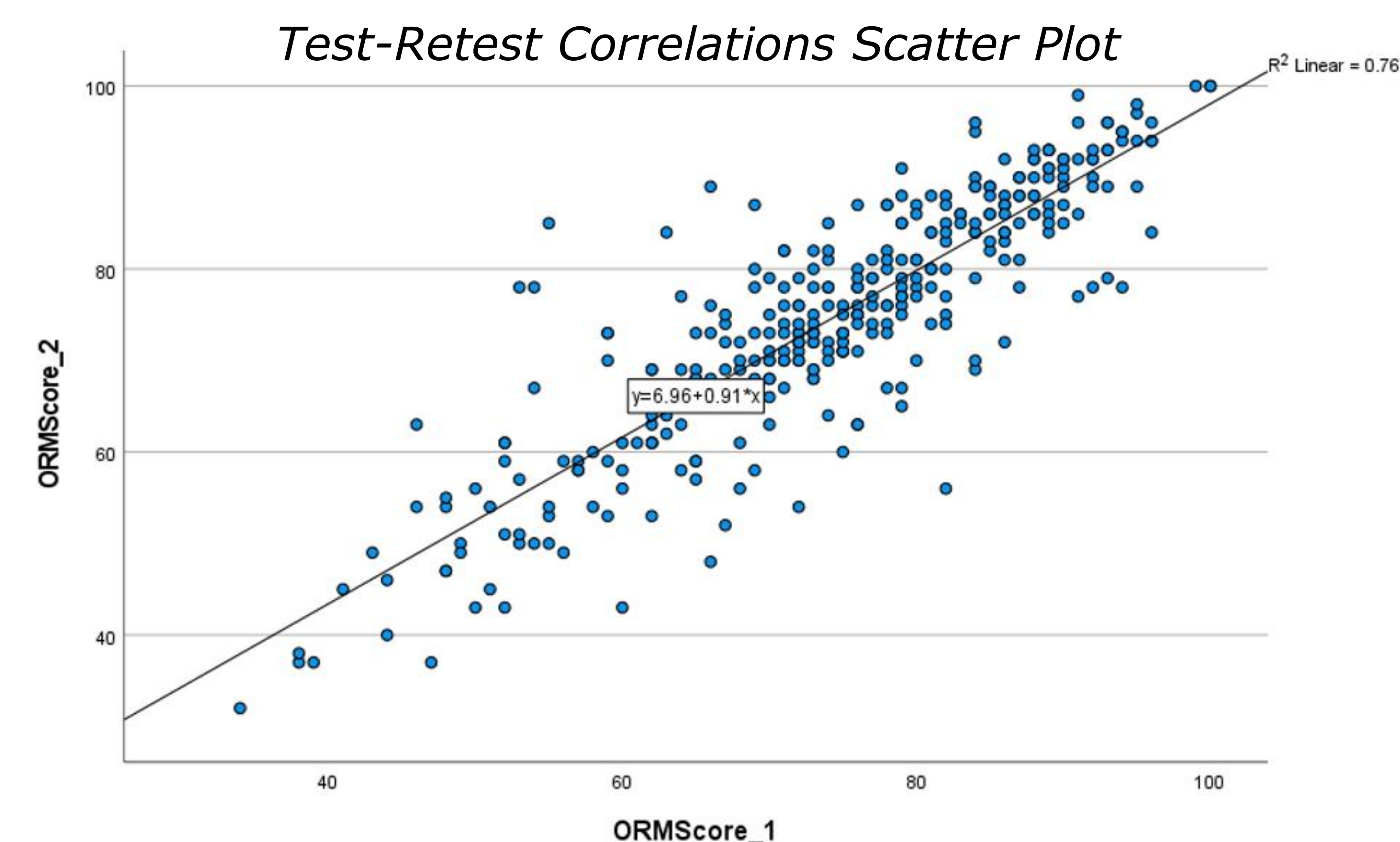
- Mean = -.374;  $t(339) = -1.031$ ; 2-sided  $p$  value = .303



### ICC Values for ORM, ORIPS, and ORM Subscales

Scale	ICC Model	Intraclass Correlation	95% CI	
			LL	UL
ORM	Single Measures	.875	0.848	0.898
History	Single Measures	.832	0.796	0.862
Experience	Single Measures	.862	0.832	0.887
Benefits	Single Measures	.852	0.819	0.878
Adaptation	Single Measures	.748	0.698	0.792
ORIPS	Single Measures	.734	0.680	0.779

Note. Two-way random effects model where both people effects and measures effects are random.



## Discussion

The results of the data analysis suggest that the ORM and ORIPS are reliable assessments tools for measuring occupational resilience in both health-promoting and health-inhibiting occupations.

The ORM and ORIPS had good reliability when administered in diverse testing environments, indicating that both can be administered in various service delivery methods.

### Limitations:

- Relatively small, non-random sample (a larger random sample would have improved accuracy of results).
- Only one rater, unable to measure interrater reliability.
- Results can only be generalized to an English-speaking population

### Recommendations for future research:

- Include multiple raters and randomized samples to establish additional psychometric properties.
- Conduct pre-post intervention measurements to determine if occupational resilience is modifiable.
- Incorporate into clinical trials.
- Develop translated versions to improve the generalizability.

## Conclusions

- The ORM and ORIPS are reliable to administer to any English-speaking male or female who is at least 18 years old.
- The ORM is reliable to use as a pre-post intervention measurement tool.
- Can be used to measure the efficacy of interventions.
- Once all psychometric properties are established, the ORM and ORIPS can be utilized in clinical trials to support future research endeavors.

## References

- See Citations List.

## Acknowledgments

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