

A New Selection Test for Family Medicine



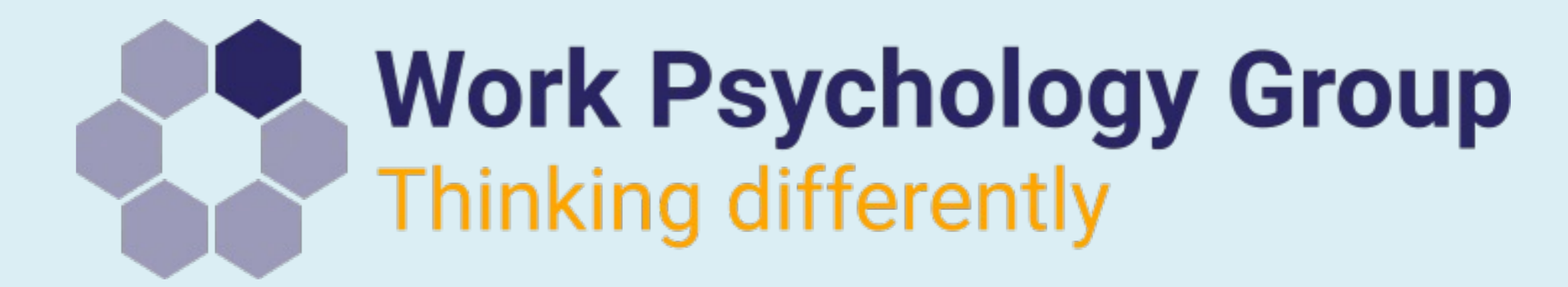
UNIVERSITY OF CALGARY

FMPProC CProMF
Family Medicine
Professional Choices
Choix Professionnels
en Médecine de Famille

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BACKGROUND

2020-Family Medicine (FM) Residency Program Directors' Selection Working Group recommendations included:

- Improve assessment of non-academic attributes
- Improve psychometric rigor & reduce bias
- Increase use of technology

There is good validity evidence for use of situational judgement tests (SJTs) in assessing non-academic attributes and predicting the subsequent in-training performance of the attributes.¹⁻³

KEY INTERVENTION

Develop, implement and evaluate an online Canada FM-specific SJT for national use by FM Residency Programs in the selection process.

RESEARCH QUESTIONS

1. How reliable is a Canada-FM SJT developed for use in the ranking of applicants in FM residency selection?
2. How do different demographic groups perform on the Canada-FM SJT?
3. What are the candidate reactions to the Canada-FM SJT?

DATA COLLECTION

2021

- SJT developed, piloted and evaluated in collaboration with Work Psychology Group®
- Designed to assess: professional integrity, adaptability, team-working/collaboration and empathy/compassion⁴⁻⁷

2022 CaRMS Cycle-operationalization & evaluation

- Mandatory for 6/17 FM Programs
- Psychometric analyses of test and item performance
- Demographic survey and post-test evaluation survey

2023 CaRMS Cycle-operationalization & evaluation

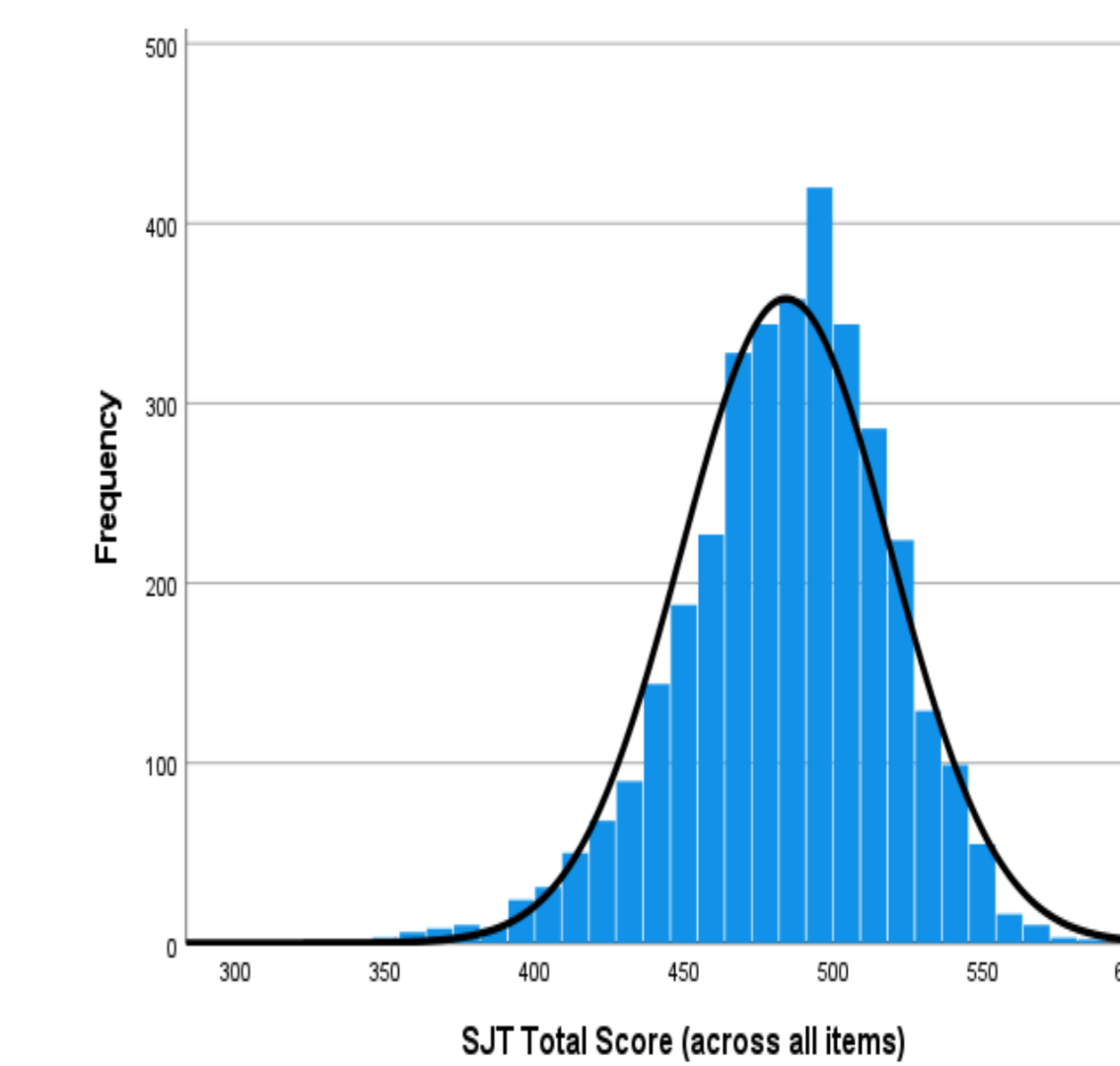
- Mandatory for 13/17 FM Programs
- Psychometric analyses of test and item performance
- Demographic survey and post-test evaluation survey

RESULTS

Test Performance-2022 & 2023 Score distribution, overall and by test version

Version	N	Reliability, α	Mean (SEM)	Max possible score	Difficulty level, % (SD)	Min score	Max score
2023 All Applicants	3478	.82	484.24 (14.93)	629	77.0% (35.21)	150	585
2023 English	2959	.82	484.52 (14.93)	629	77.0% (35.29)	150	585
2023 French	519	.83	482.66 (14.52)	629	76.7% (34.75)	336	585
2022 All Applicants	1835	.78	487.15 (14.55)	654	74.5% (31.10)	316	561
2022 English	1309	.76	490.40 (14.16)	654	75.0% (29.03)	316	561
2022 French	526	.81	479.05 (14.98)	654	73.2% (34.46)	323	555

2023 Overall score distribution (N=3478)



2023 Test item quality

	Rating Items (109 items)	Ranking Items (10 items)
Good %	23.9%	10.0%
Satisfactory %	40.4%	50.0%
Moderate %	14.7%	20.0%
Limited %	21.1%	20.0%

- Item analysis used to assess the effectiveness of each individual rating or ranking test item
- Correlated with mean SJT score
- Analysis led to 3/119 test items being rekeyed

2023 Demographic survey (selected data)

	Category	N	% of respondents	Mean score (SD)	Effect Size (Cohen's d)
Test Language*	English	2947 [†]	85.0%	485.04 (34.14)	Not statistically significant
	French	519	15.0%	482.66 (34.75)	
Gender identity	Man	288	32.9%	482.01 (36.43)	.16 (negligible effect size)
	Woman	568	64.9%	487.59 (35.32)	
Place of Medical Education	Canadian Medical Graduate (CMG)	362	41.1%	492.26 (33.33)	.33 (small effect size)
	International Medical Graduate (IMG)	519	58.3%	480.63 (36.64)	
	United States Medical Graduate (USMG) [‡]	5	0.6%	-	

- Optional survey completed before or after the test
 - Response rate: N=953/3478 (27%)
 - Data linked to candidate test scores
- * Test language information obtained directly from the test
[†] 12 outliers were removed
[‡] USMG candidates were excluded from the analysis due to a small sample size

2023 Candidate evaluation (selected data)

Survey statement	% of respondents who agreed with the statement (total number of respondents)	
	English	French
Test content was relevant to role of a Canadian Family Physician	84% (N=2548)	75% (N=439)
Test content was appropriate level of difficulty for training level	80% (N=2546)	72% (N=437)
Test content was fair to all applicants	69% (N=2524)	75% (N=429)

- Optional anonymous survey completed immediately after the test
- Response rate: N=3006/3478 (86%)
- Qualitative feedback:
 - Concerns & suggestions related to the functionality of the testing platform
 - Phrasing of scenarios and scales a little unclear & could benefit with more specificity
 - Insufficient time allocated to complete the test

DISCUSSION & CONCLUSION

- **The Canada FM-SJT demonstrated overall excellent level of internal reliability ($\alpha=0.82$)**
- Promising early indications that the Canada FM-SJT is suitable for measuring non-academic attributes & can differentiate between applicants
- Slight differences in test performance observed between demographic groups – women and CMGs scored higher than men and IMGs respectively, but negligible to small differences only
- Consistent & generally positive candidate feedback across English and French test versions
- Candidate feedback to be used in 2024 test version

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