RELIABILITY OF A SCORING ALGORITHM FOR THE MOTIVATIONAL COMMUNICATION COMPETENCY ASSESSMENT TEST (MC-CAT)
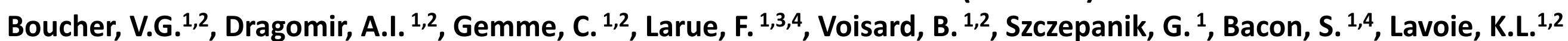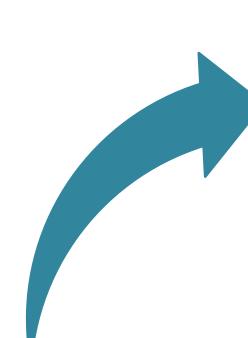
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METHODS

- 14 international experts were recruited

Tasks for dialogue exchanges (6-7 per case) between a physician and 3 separate "patients":
a) Rank order the physician statements from most to least consistent with MC
b) Identify which of the 11 competencies were presented in each statement.

① **Base case development by the team**
October 7th 2018- June 27th 2019

② Case **validation** with international experts: **ranking & competency stage**
July 24th 2019. Closed: September 23th, 2019; n=14

③ **Base case modification by the research team**
September 24th - October 23th, 2019

④ Case **confirmation** with international experts: **ranking & competency agreement**
October 24th, 2019. Closed: December 16th, 2019; n=13

⑤ **Final base case modifications by the team**

INTRODUCTION

- Importance of physician training to support lasting health behaviour changes in patients suffering from chronic diseases
- Emergent research topic
- Existing evaluation tools are complex, invasive, time consuming, and impractical for use within the medical context

AIM

- This study sought to validate the scoring algorithm and the classification scheme of a Motivational Communication (MC) competency assessment tool with an international panel of behaviour change experts.

RESULTS

Average agreement between experts and initial coding: **response item rankings**

Case	Good	Acceptable	Poor
1	54.8%	33.1%	12.2%
2	60.5%	30.0%	9.5%
3	66.5%	26.5%	6.7%

Good = same item response order as proposed

Acceptable = +/- 1 deviation in rank from our item order (e.g., 5 instead of 4)

Poor = +/- 2 deviation in rank from our item order (e.g., 1 instead of 3)

Average agreement between experts and reseach team: **competency identification**

	Case 1	Case 2	Case 3	Average
Reflective listening	34.8%	58.6%	39.6%	44.3%
Expressing empathy	50.0%	56.2%	46.7%	51.0%
Eliciting change-talk/ Evocation	39.0%	51.0%	49.0%	46.3%
Responding to resistance	46.0%	37.2%	43.1%	42.1%
Setting goals	32.1%	60.2%	41.0%	44.5%
Demonstrating acceptance, tolerance, respect	34.3%	49.0%	39.8%	41.0%
Expressing collaboration	40.2%	53.6%	51.8%	48.5%
Expressing hostility or impatience	31.2%	46.2%	42.4%	39.9%
Negatively judging or blaming	44.8%	60.2%	47.8%	50.9%
Being argumentative or confrontational	38.3%	50.7%	56.3%	48.5%
Providing information neutrally	30.5%	39.8%	41.0%	37.1%
Average	38.3%	51.2%	41.6%	43.7%

Case **confirmation** with international experts: **final ranking & competency agreement**

Case	1	2	3
Agreement ranking	80.8%	89.7%	92.3%
Agreement competency identification	79.4%	78.3%	76.4%

CONCLUSION / IMPLICATIONS

- These results demonstrate good response agreement across the 3 cases and 11 competencies among behaviour change experts.
- The next step will be to expand the case bank, with "new" cases retaining the same initial base structure but varying the patient's socio-demographics, chronic disease, behavioural target, and personal information.

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