

PUBLISHED VERSION

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Does cognitive style predict participation in colorectal and prostate cancer screening?

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Two forms of cognitive processing

- **Experiential** processing
 - Fast and autonomous
 - Instinct, intuition, associative learning
 - Independent of working memory
 - Old in evolutionary terms
- **Rational** processing
 - Effortful and algorithmic
 - Abstract, hypothetical thinking
 - Relies on working memory
 - Thought to have evolved recently

Experiential and rational processing

- Default-interventionist model of operation:
 - experiential processes rapidly provide an outcome
 - rational processes may intervene and revise it.
- Individual differences in use of each system.
- **Cognitive style (CS):** stable, trait-like
- Measured by the Rational-Experiential Inventory (REI)
- Reliance on, and ability in, each processing type:
 - rational processing: **Need for Cognition** (NFC) scale
 - experiential processing: **Faith in Intuition** (FI) scale

Rational-experiential inventory

- NFC scale example items
 - I don't like to have to do a lot of thinking
 - I try to avoid situations that require thinking in depth about something
 - I prefer complex to simple problems
- FI scale example items
 - I believe in trusting my hunches
 - My initial impressions of people are almost always right
 - When it comes to trusting people I can usually rely on my “gut feelings”

Cognitive style and health

- Higher NFC linked with
 - Preference for text-based information, better recall
 - Higher internal locus of control
 - Greater effectiveness for gain-framed messages
 - Lower NFC linked with
 - Preference for emotion-based messages
 - Respond better to pictorial information
 - Greater susceptibility to ratio bias
- ↪ Does CS have any relationship with healthy behaviours?
Does CS vary across demographic groups?

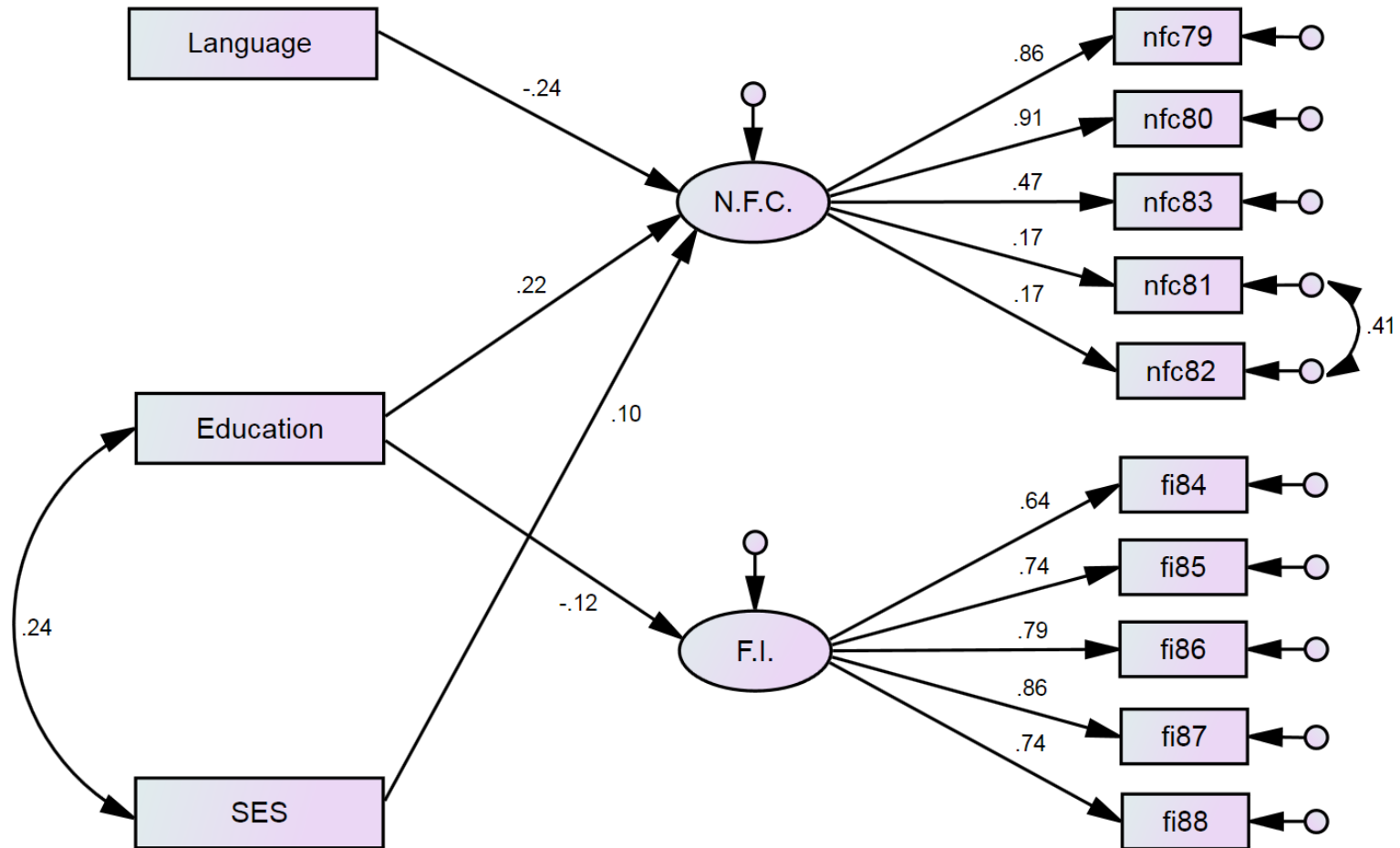
This study

- Baseline survey: demographic items, past screening
- Mailed faecal occult blood test (FOBT)
- Endpoint survey: REI

- Final sample $N = 585$ men (of $N = 2400$ invited)

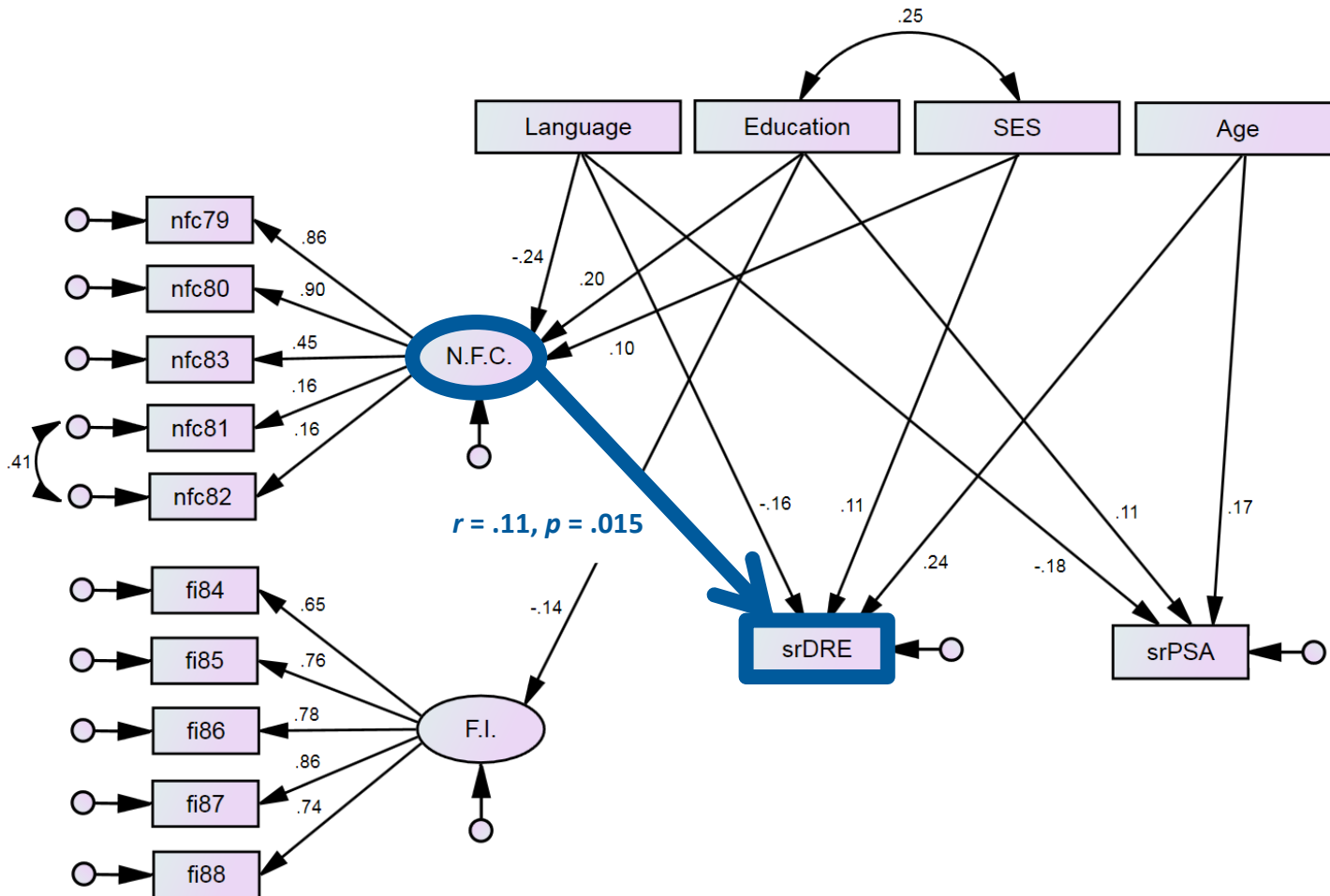
- Behavioural outcomes to be predicted:
 - Self-reported prostate cancer screening: PSA test, DRE
 - Self-reported colorectal cancer screening: FOBT test
 - Measured participation in mailed FOBT test
- Analysis: structural equation modelling using AMOS

Predicting NFC and FI



$\chi^2(62) = 224.83, p < .001, CFI=.93, RMSEA=.07, 90\% CI (.06, .08)$

Predicting prostate screening



$\chi^2(97) = 284.41, p > .001, CFI=.92, RMSEA=.06, 90\% CI (.05, .07)$

Limitations

- Sample a poor representation of the Australian population
 - Over half of sample resided in highest two SES deciles
 - Four times the rate of postgraduate education
 - FOBT uptake rate double that of the national program
- REI has been improved upon since the version used

Conclusions

- Men who identified as enjoying effortful thought were slightly more likely to report undergoing a DRE than men who disliked thinking hard. It did not make a difference whether men trusted or distrusted their gut reactions.
- FOBT screening (self-reported and observed) not predicted.
- Reasons for these results may be:
 - Aspects of DRE considered using rational processes more motivating
 - NFC linked to willingness to report DRE
 - DRE involves more active choice than FOBT or PSA

Implications

- As FI is less tied to demographics, including experientially processed information may be beneficial for individuals
 - who are less educated
 - who are more socially disadvantaged
 - for whom English is not the first language.
- Needs further exploration in more diverse samples
- Worth considering more habitual healthy behaviours

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