

Abbreviated and domain-specific measures of the Consideration of Future Consequences (CFC): a psychometric approach





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Introduction and research objective

CFC refers to the degree to which individuals consider and are influenced by the immediate and future outcomes of their actions. Traditionally, CFC has been conceptualized as a stable individual difference over time (Joireman et al., 2012; Strathman et al., 1994). However, recent studies suggest that domain-specific and abbreviated CFC scales may capture the construct more precisely while retaining the strong psychometric properties of the original long form (e.g. Chng et al., 2022; van Beek et al., 2013).

We aimed to: (1) develop abbreviated 10- and 8-item versions of the CFC scale in Spanish, (2) adapt the scale to four specific domains (health, healthy eating, physical activity, and work) and (3) examine their psychometric properties and predictive validity.

Method of study 1:

N = 1.095 adults (67.4% women; age range: 18–75, M = 26.64, SD = 10.67). Data were collected via paper-and-pencil.

CFC scale (14 items): Spanish version with two subscales: CFC-Immediate and CFC-Future, rated on a 7-point Likert scale (Vásquez-Echeverría et al., 2018).

Zimbardo Time Perspective Inventory (ZTPI): Short form (15 items) assessing five-time orientations (5-point scale).(Košťál et al., 2016)

Adolescent and Adult Time Inventory – Time Attitudes (AATI-TA): 30 items measuring attitudes toward past, present, and future (5-point scale) (Mello & Worrell, 2007)

Method of study 2:

N= 738 adults (63.1% women; age range: 18–72, M = 32.61, SD = 12.31). 72.9% completed paper-based surveys.

CFC scales (CFC-14, CFC-10 y CFC-8): General and domain-specific (health, healthy eating, physical activity, work) (Chng et al., 2022)

Healthy Eating (ad-hoc): Total score based on average fruit and vegetable intake (7-point scale) (Kristjansdottir et al., 2006)

Workplace Innovation Behaviors: Total score from the 9-item scale (5-point Likert) (Janssen, 2000)

All participants provided informed consent. The studies were approved by the Ethics Committee of the University of the Republic (Uruguay)

Results

Table 1. Fit indices of the CFA of the CFC scale

Model	χ2	gl	CFI	TLI	RMSEA	SRMR
Study one						
CFC-14: general	300.133*	75	.909	.890	.052 (.046059)	.046
CFC-10: general	80.318*	33	.970	.960	.036 (.026046)	.032
CFC-8: general	56.484*	18	.970	.954	.044 (.031057)	.030
Study two						
CFC-14: general	228.49*	75	.901	.880	.053 (.045061)	.046
CFC-10: general	80.25*	33	.953	.936	.044 (.032057)	.036
CFC-10: health	109.71*	33	.952	.935	.057 (.045069)	.037
CFC-10: physical activity	82.44*	33	.912	.880	.066 (.048083)	.055
CFC-10: healthy eating	84.75*	33	.936	.913	.067 (.049084)	.044
CFC-10: work	54.90*	33	.963	.950	.048 (.024070)	.041
CFC-8: general	51.14*	18	.957	.933	.050 (.034067)	.036
CFC-8: health	50.35*	18	.972	.956	.050 (.034067)	.036
CFC-8: physical activity	36.50*	18	.957	.933	.054 (.028080)	.051
CFC-8: healthy eating	47.96*	18	.953	.927	.069 (.046093)	.040
CFC-8: work	24.71*	18	.985	.976	.036 (.000068)	.033

Notes. CFC-I = Immediate subscale; CFC-F = Future subscale; CFC-14 = CFC with 14 items; CFC-10 = version with 10 items; CFC-8 = version 8 items; Health, Physical Activity, Healthy Eating, Work = Domain-specific adaptations of the CFC scale. Internal consistency was solid across all versions (ω between .70 and .84)

Discussion

- Abbreviated general CFC scales and domain-specific versions demonstrated good to very good psychometric performance (Chng et al., 2022)
- Domain-specific CFC scales showed stronger and more consistent associations with relevant behaviors and demonstrated incremental validity over general versions (e.g. Murphy et al., 2020)
- Short versions of CFC showed stronger measurement invariance across age and education than the full scale. Gender-based scalar invariance was not fully achieved in any version, highlighting a limitation for cross-gender comparisons.
- Shorter and domain-specific CFC versions offer efficient tools for research with time or space constraints. Results suggest that CFC may vary depending on the context or life domain, highlighting the need for further research using person-centered approaches

Convergent Validity (study one):

- ZTPI: CFC-Immediate was + associated with Past Negative, Present Fatalistic, and Present Hedonistic, and with Future. CFC-Future was + related to ZTPI-Future and to Present Fatalistic.
- AATI-TA: CFC-Immediate showed associations with Past Positive and Present Positive, and + associations with Past Negative and Present Negative. CFC-Future was + associated with Future Positive and with Future Negative. CFC-Immediate report the opposite pattern.

Correlations and incremental validity (study two):

- Domain-specific CFC scales correlated more strongly with relevant behaviors than general scales.
- Hierarchical regressions confirmed that domain-specific scales (Health, Healthy Eating) outperformed general versions in predicting healthy eating.
- Adding domain-specific predictors reduced the effect of general CFC scales to non-significance.



