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The Climate Change Hope Scale: Does the Three-Factor Model Fit an Adult Sample?

Yuhan Bi

University of Nevada, Las Vegas

Victoria Angulo

University of Nevada, Las Vegas

Michal Newhouse-Van Vlerin

University of Nevada, Las Vegas

Orei Z. Odents

University of Nevada, Las Vegas

Kimberly A. Barchard

University of Nevada, Las Vegas

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The Climate Change Hope Scale: Does the Three-Factor Model Fit an Adult Sample?

Yuhan Bi, Victoria Angulo,
Michal Newhouse-Van Vlerin, Orei Z. Odents, and
Kimberly A. Barchard

University of Nevada, Las Vegas

INTRODUCTION

- The Climate Change Hope Scale (CCHS; Li & Monroe, 2017) adapted Synder et al.'s (1991) Hope Scale to focus specifically on climate change.
- In an adolescent sample, the CCHS has three factors: Personal-sphere willpower and waypower, Collective-sphere willpower and waypower, and Lack of willpower and waypower.
- Our research tests if Li and Monroe's (2017) three-factor model fits the data from an adult sample.

METHOD

- A total of 500 Mturk workers were recruited using CloudResearch's Approved Participants.
- Fifteen climate change deniers were filtered out based on responses to two questions regarding belief in climate change.
- The remaining 485 participants ranged in age from 19-76 (M = 39.63, SD = 11.81); 83% identified as Caucasian/White, while 57% identified as male.
- Another 21 participants were excluded from the analyses because they were identified as multivariate outliers (Mahalanobis distances with $p \leq .001$).
- We ran a confirmatory factor analysis (CFA) using the R package *lavaan*.
- Good fit would be indicated by root mean square error of approximation (RMSEA) less than or equal to .06 and comparative fit index (CFI) and Tucker-Lewis index (TLI) greater than .95.

RESULTS

- The three-factor model fit well (RMSEA = .04, CFI = .99, and TLI = .99).

DISCUSSION

- The three-factor model fit the data well which indicates the same three subscales can be calculated for adults and adolescents.
- One limitation of this study is that all participants lived in the United States and the majority identified as Caucasian/White.
- Future research could include more diverse samples and samples from other countries.



Climate Change Hope: The three-factor model fits well in adults

Table 1

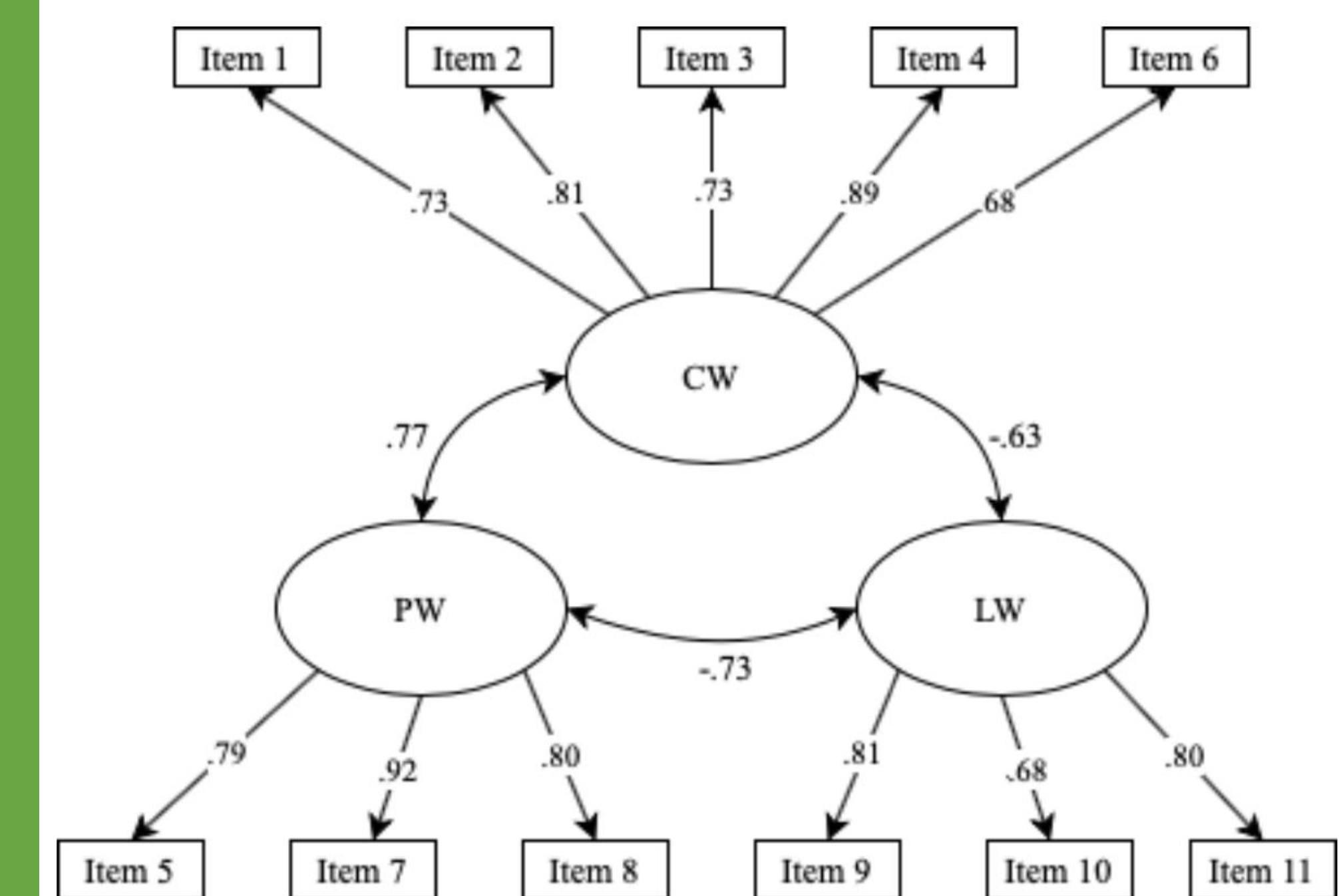
The Three-Factors of the Climate Change Hope Scale

Item		Factor
1	I believe people will be able to solve problems caused by climate change.	CW
2	I believe scientists will be able to find ways to solve problems caused by climate change.	CW
3	Even when some people give up, I know there will be others who will continue to try to solve problems caused by climate change.	CW
4	If everyone works together, we can solve problems caused by climate change.	CW
5	I am willing to take actions to help solve problems caused by climate change.	CW
6	I believe more people are willing to take actions to help solve problems caused by climate change.	CW
7	I know that there are things that I can do to help solve problems caused by climate change.	PW
8	I know what to do to help solve problems caused by climate change.	CW
9	Climate change is beyond my control, so I won't even bother trying to solve problems caused by climate change.	PW
10	Climate change is so complex we will not be able to solve problems that it causes.	PW
11	The actions I can take are too small to help solve problems caused by climate change.	PW

Note. CW= Collective-sphere willpower and waypower, PW= Personal-sphere willpower and waypower, LW= Lack of willpower and waypower.

Figure 1

Three-factor Model for the Climate Change Hope Scale



Note. CW = collective-sphere willpower and waypower, PW = personal-sphere willpower and waypower, LW = lack of will and waypower.