The Goal Characteristics (GC) questionnaire:
A comprehensive measure for goals content, attainability, interestingness, and usefulness

Gabriela Iwama, Maria Wirzberger, Falk Lieder

Max Planck Institute for Intelligent Systems, Tübingen
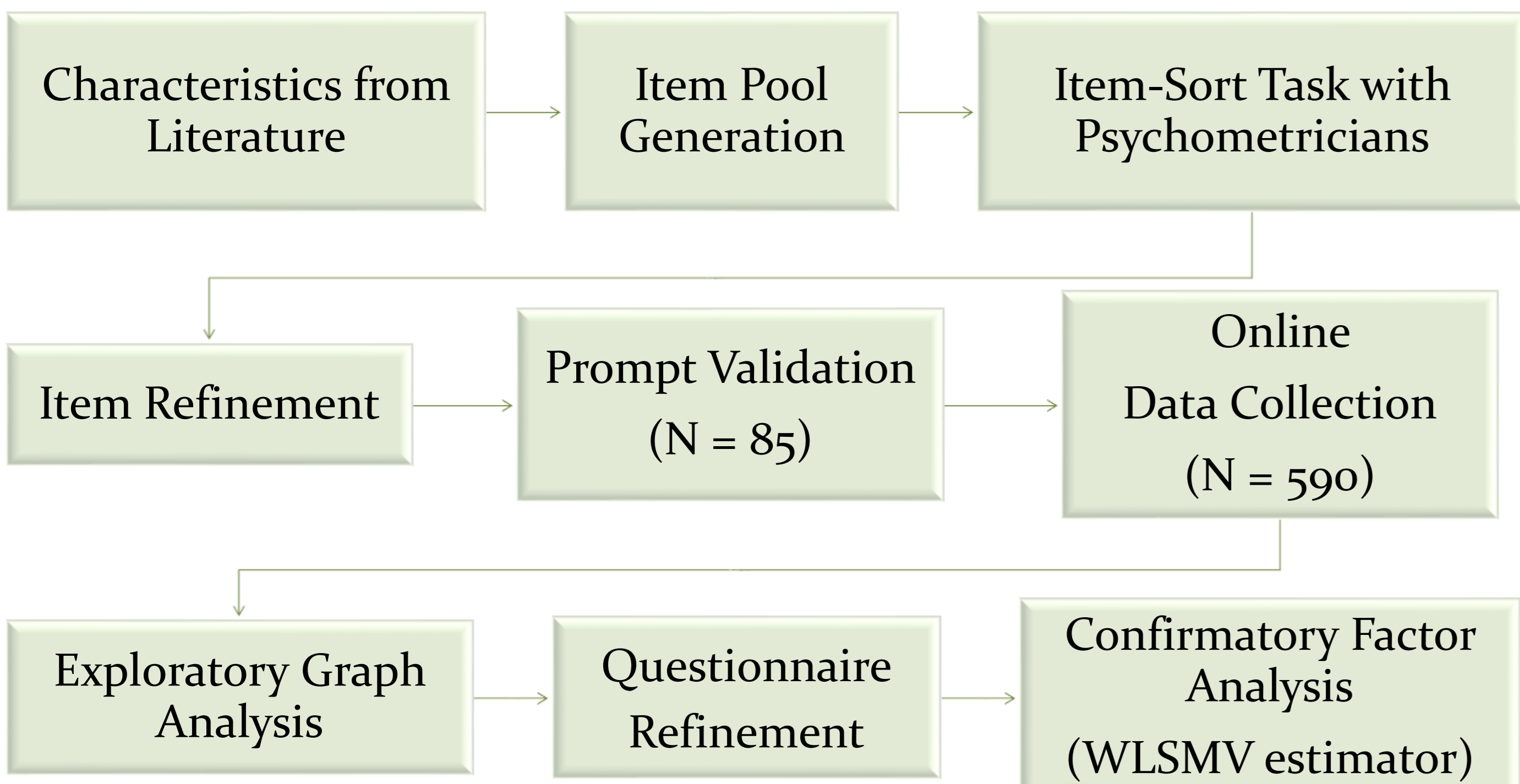
✉ gabriela.yukari.iwama@gmail.com

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Introduction

- Some characteristics of goals help people achieve them[1].

- Previous studies had focused on the influence of specific, challenging and approach goals.

- Existing measures are usually context specific[2].

- The aim of this study is to develop and evaluate the psychometric properties for a comprehensive and general measure for goal's characteristics.

Method

Characteristics from Literature → Item Pool Generation → Item-Sort Task with Psychometricians

Item Refinement → Prompt Validation (N = 85) → Online Data Collection (N = 590)

Exploratory Graph Analysis → Questionnaire Refinement → Confirmatory Factor Analysis (WLSMV estimator)
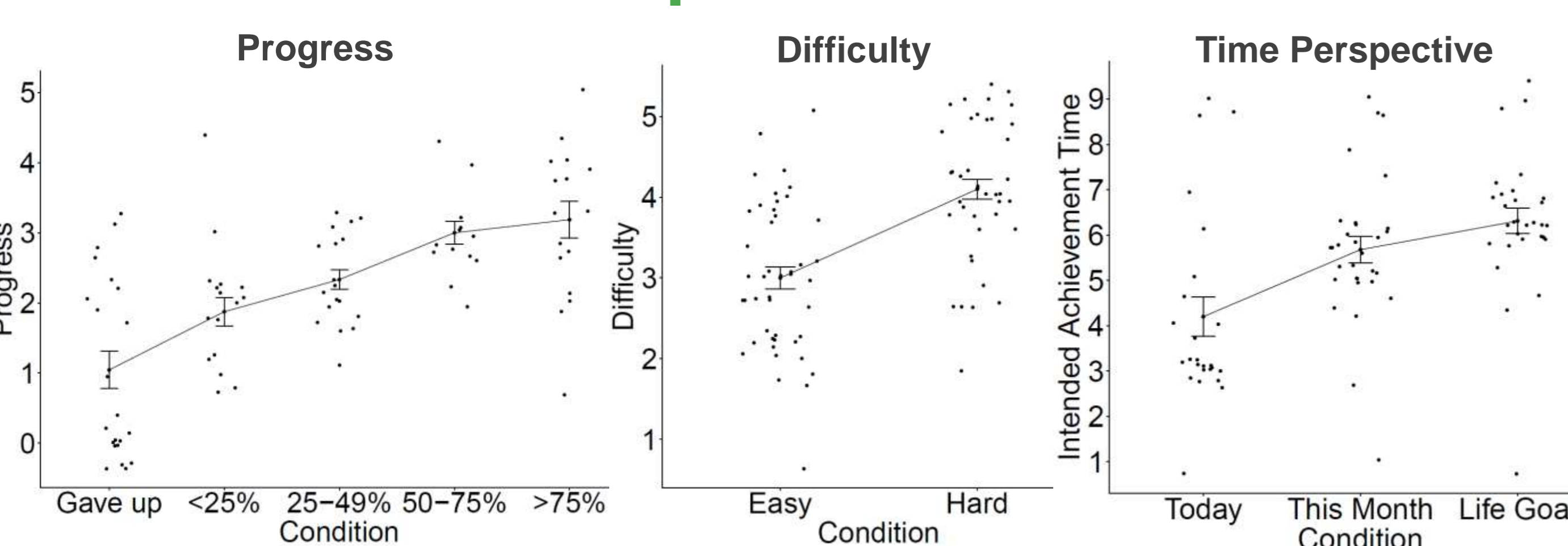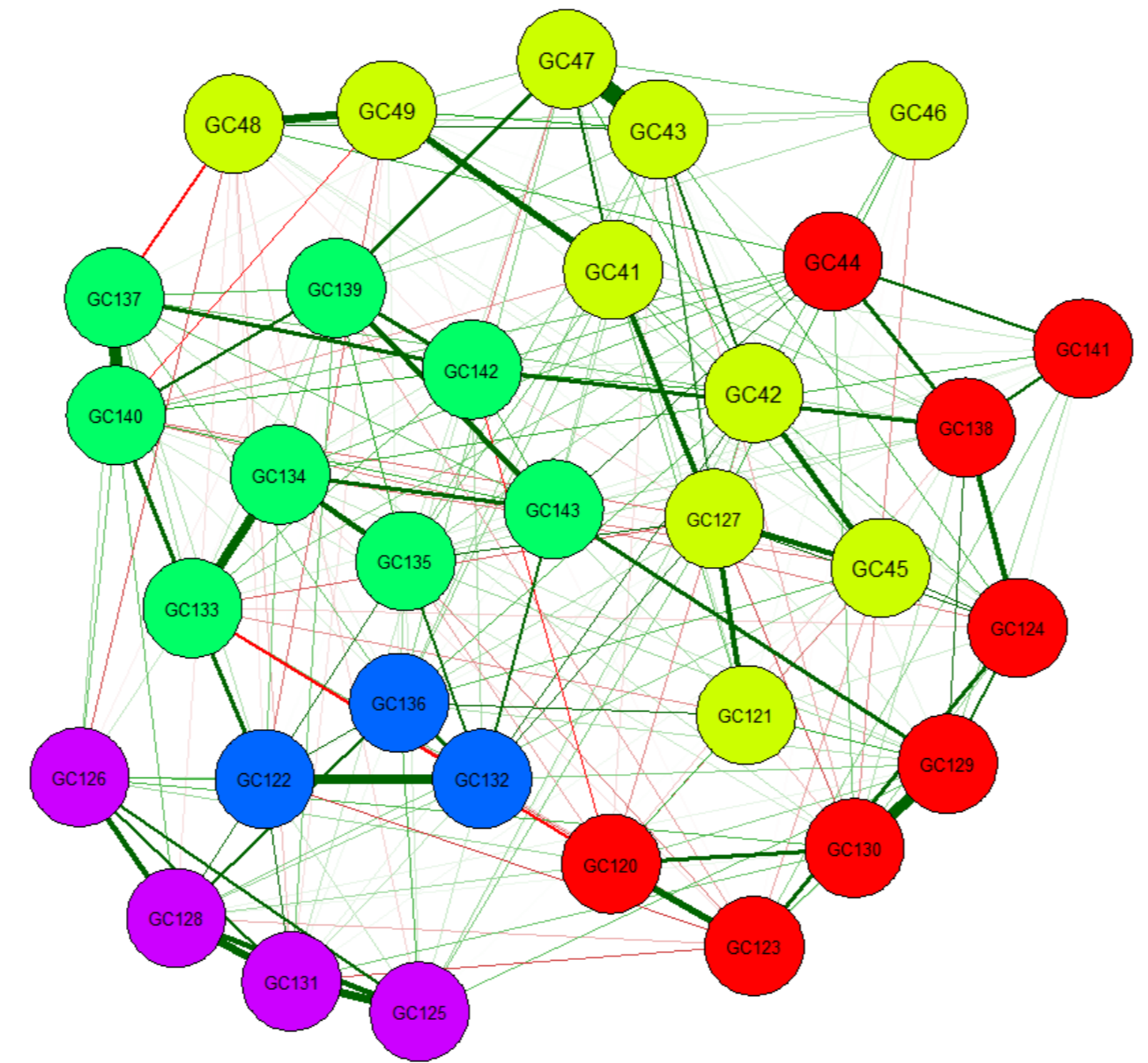
Data Collection

In an online survey, 590 participants (52% female; average age = 40 years, SD = 12 years) rate their agreement with 171 statements using a 5-point scale regarding a self-generated goal. To avoid memory bias and ensure variability in the goals, participants were prompted to report goals with different time horizons, difficulties, and progress in a between-subjects design. Example:

Think about a goal that you intended to achieve **today** that you are already **gave up** and you thought it would be **hard** to complete it.

Prompt Validation

Exploratory Graph Analysis

EGA is a dimensional analysis based on Graphical LASSO regression and a walktrap algorithm to identify the factors. It was showed that EGA has a better accuracy compared to Parallel Analysis[3].

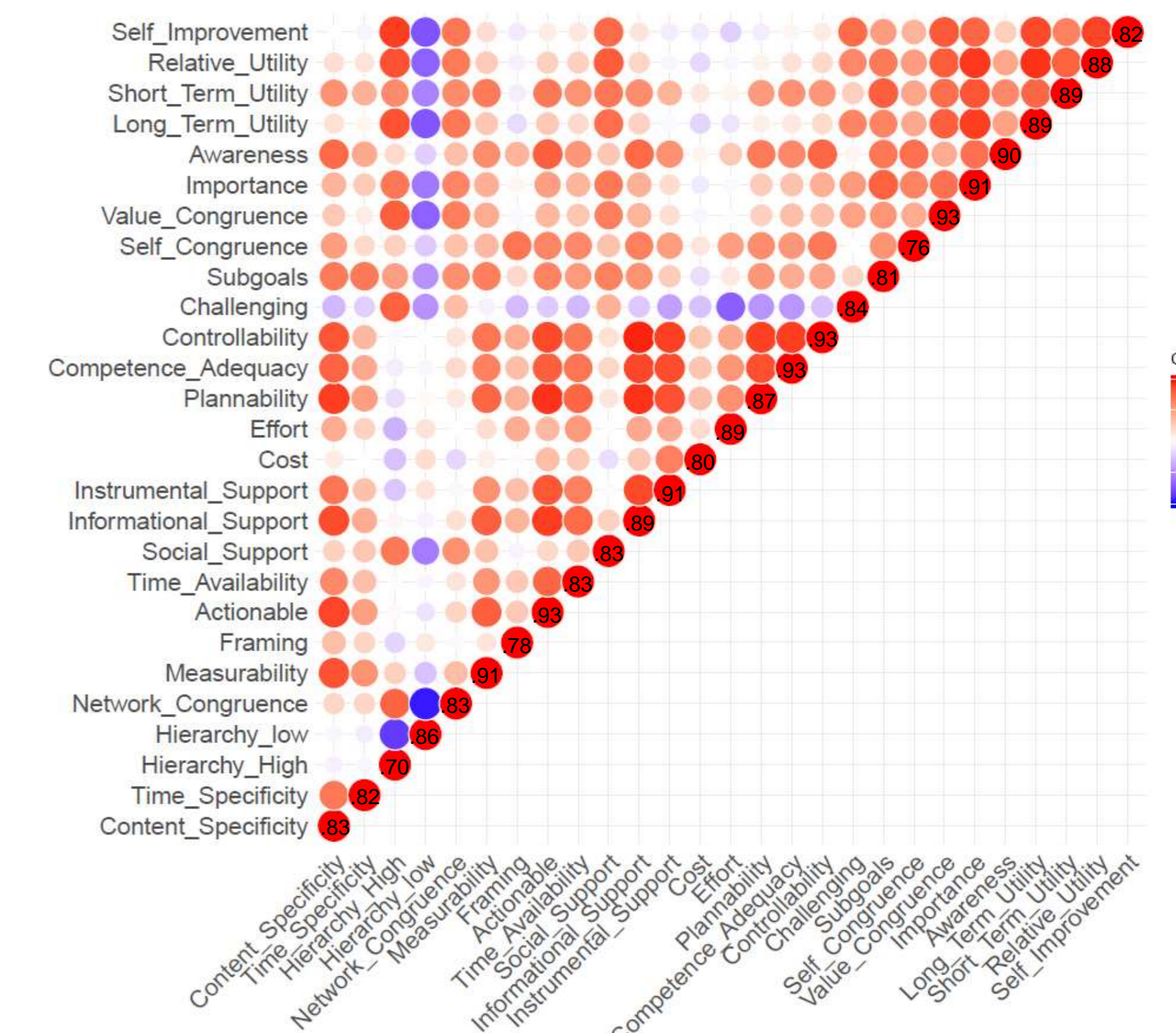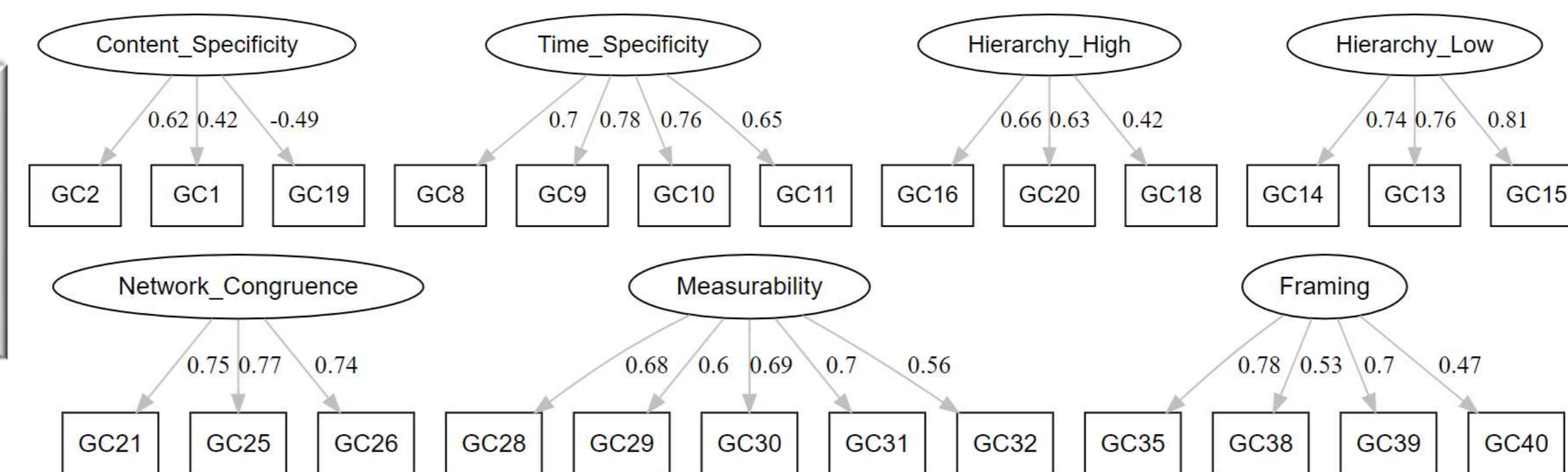*Figure 1.* Example of Exploratory Graph Analysis with Interest subscale items.

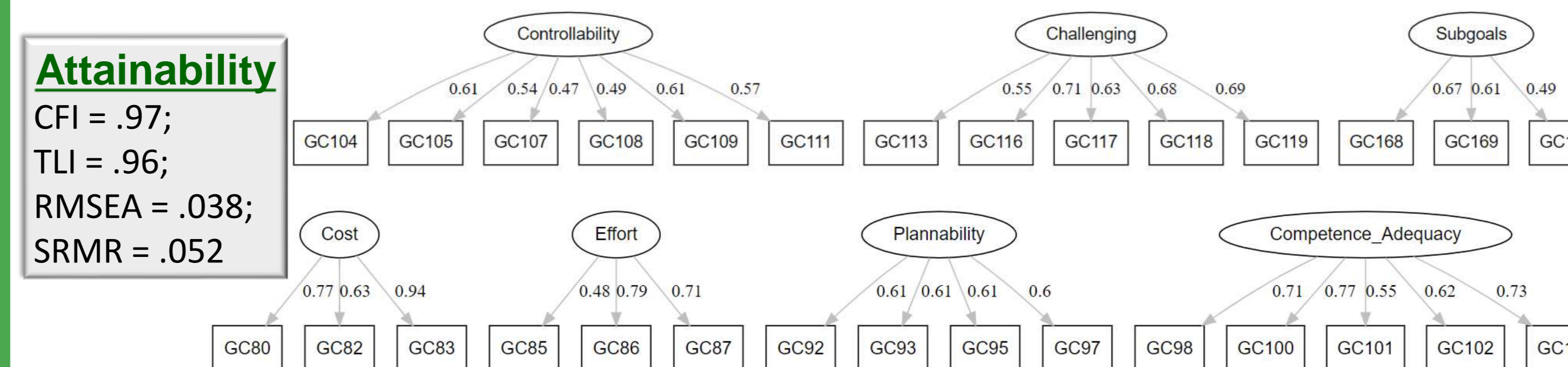## Final Structure Evaluation

Content
CFI = .96;
TLI = .96;
RMSEA = .038;
SRMR = .052

Attainability
CFI = .97;
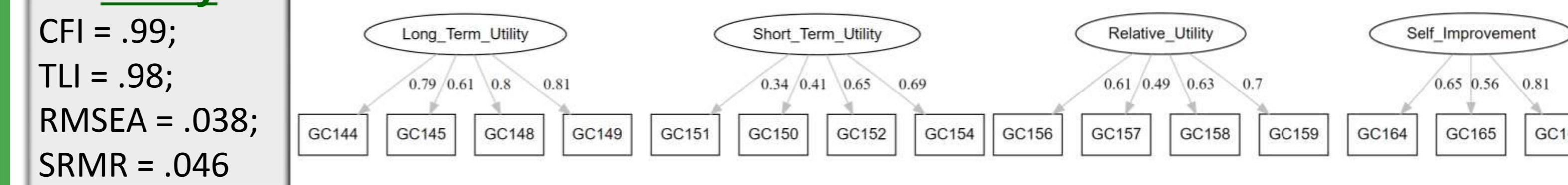TLI = .96;
RMSEA = .038;
SRMR = .052

Interest
CFI = .97;
TLI = .97;
RMSEA = .038;
SRMR = .052

Utility
CFI = .99;
TLI = .98;
RMSEA = .038;
SRMR = .046

Overall Fit
27 factors measured by 105 items
CFI = .93; TLI = .93; RMSEA = .046; SRMR = .059

Figure 2. Fit indices for alternative models using WLSM estimator. x^2 = Chi-Square with Satorra-Bentler correction; df = degrees of freedom; CFI = Comparative Fit Index; TLI = Tucker Lewis index; RMSEA = Root Mean Square Error of Approximation; SRMSR = Standardized Root Mean Square Residual.

Interfactor Correlation

Figure 3. Interfactor correlation matrix. Composite reliability indices are showed on matrix diagonal.

Sample Items

Factor	Item with highest factor loading
Content Specificity	This goal has a clear defined outcome or final state.
Time Specificity	I have a clear deadline by which I want to attain this goal.
Measurability	My progress in this goal can be tracked with objective measures.
Controllability	As long as I do what it takes, I will achieve this goal.
Plannability	It's hard to foresee what will be my next steps. (Reversed)
Social Support	People encourage me to keep going.
Actionable	I know how to start working on this goal.
Importance	This goal doesn't drive much of my attention. (Reversed)
Awareness	I didn't know I had this goal until you asked me. (Reversed)
Long-Term Utility	This goal won't make a huge impact in the future. (Reversed)
Self-Improvement	This goal will help me grow as a person.

Conclusion and Future Directions

- The final structure showed a good fit and reliability indices. Few characteristics showed an unexpected structured (e.g., Self-Congruence and Hierarchy).

- The GC questionnaire can be used to assess characteristics of any goal, such as educational, organizational or personal goals.

- Future studies can investigate interaction effects between characteristics on goal achievement and measurement invariance.

See the full questionnaire:
osf.io/qfhup/

References

1. Milyavskaya & Werner (2018)   2. Locke & Latham (2002).   3. Golino & Epskamp (2017)

http://re.is.mpg.de