

Development and Validation of a rapid assessment version of the Assessment Survey of Primary Care (RA-ASPC) scale in China

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Objective

- Measuring quality of primary care has attracted much attention around the world. Our team has previously developed and validated an Assessment Survey of Primary Care (ASPC) for assessing quality of primary care in China.
- To facilitate the daily use of ASPC, this study aimed to develop and validate a rapid assessment version of ASPC (RA-ASPC) using a multi-phase approach, including Phase I item development; and Phase II scale validation according to the CONsesus-based Standards for the selection of health Measurements INstruments(COSMIN) checklist.

Methods

- This is a multi-phase study on 21 experts and 1,184 patients from 12 primary care facilities in ten cities.
- In Phase I, importance, representativeness, easy understanding, and general applicability of each item in ASPC scale were rated to select the top two ranked items for constituting RA-ASPC.
- In Phase II, reliability of RA-ASPC was tested by calculating both Cronbach's alpha and McDonald's omega coefficients. Structural validity was assessed by exploratory and confirmatory factor analysis (EFA and CFA). Concurrent validity was performed by analysing the relationship between RA-ASPC and patient satisfaction. Discriminant validity was tested by assessing the difference of RA-ASPC scores between patients with or without family doctors.

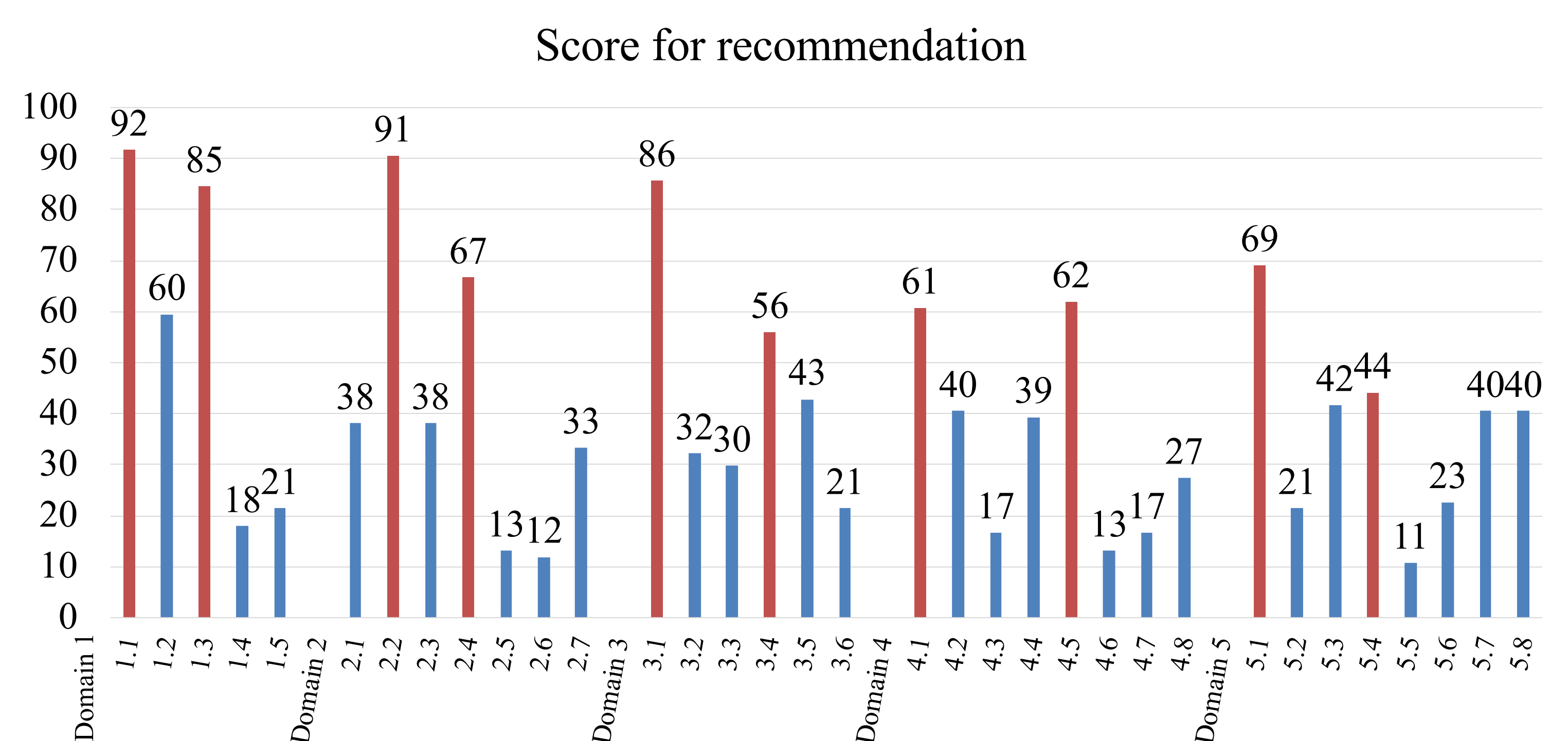


Figure 1. Item selection after expert's consensus based on the score for recommendation, presented as the average percentage of the four criteria
Notes: The top two items with the highest average percentage were considered to reach expert's consensus and selected to constitute the rapid assessment of the ASPC scale, which was highlighted in red.

Results

- In Phase I, ten items were selected to constitute the five domains of RA-ASPC scale (Figure 1).
- In Phase II, both Cronbach's alpha (0.732) and McDonald's omega (0.729) suggested satisfactory internal consistency.
- In EFA, explained variance of RA-ASPC (72.6%) indicated its ability to measure quality of primary care in China. CFA showed convincing goodness-of-fit (GFI=0.996, AGFI=0.992, CFI=1.000, NFI=0.980, RMR=0.022, and the RMSEA=0.000) for RA-ASPC (Figure 2).
- Positive association between RA-ASPC and patient satisfaction supported the concurrent validity of RA-ASPC.
- Patients with family doctors perceived higher quality of primary care than those without family doctors, indicating good discriminant validity of RA-ASPC scale.

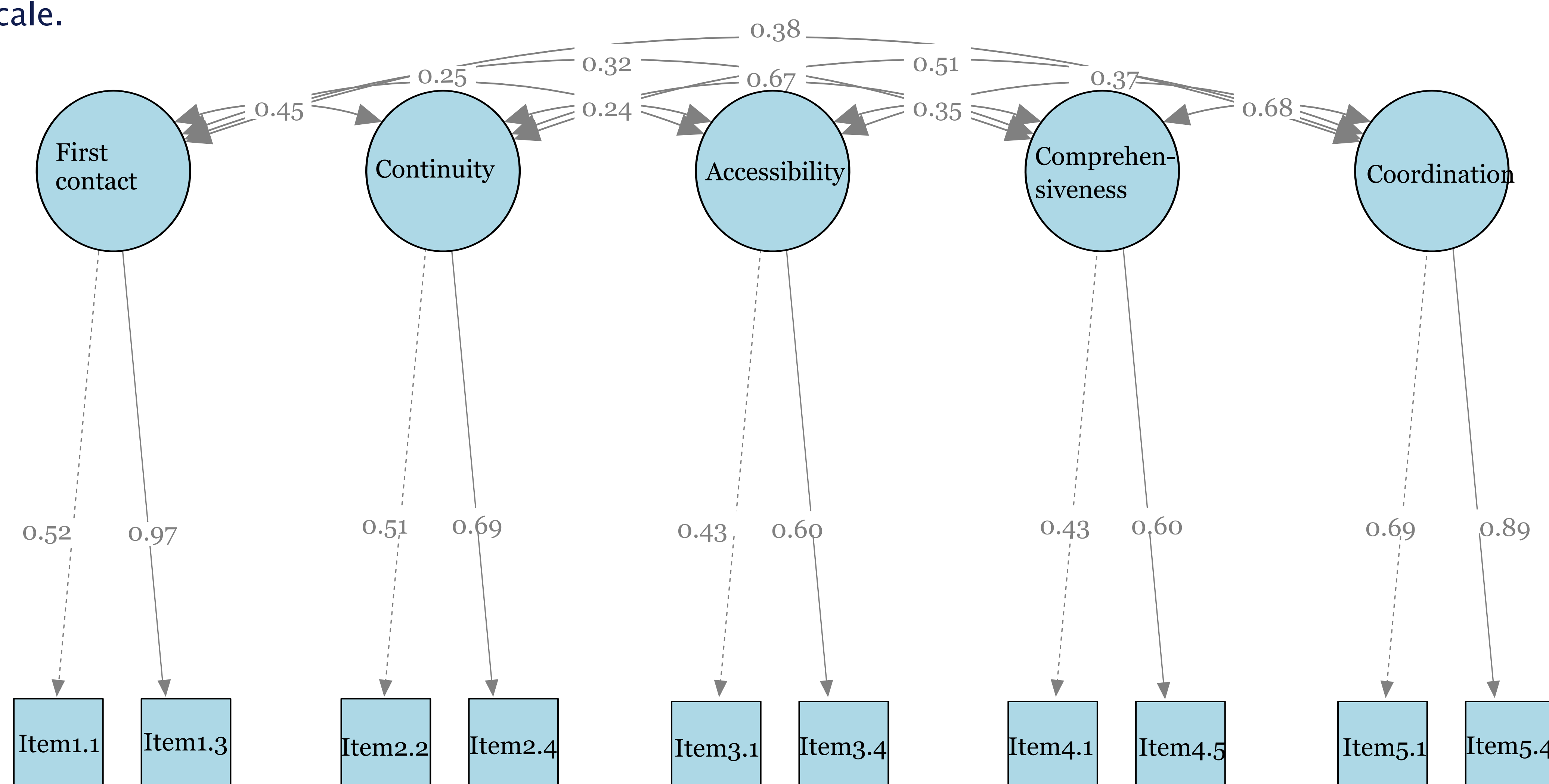


Figure 2. Confirmatory factor analysis of the RA-ASPC using Dampened weighted least squares (DWLS) as estimator (N=604). Chi-square minimum = 24.081; Degree of freedom = 25; Goodness of Fit Index (GFI) = 0.996; Comparative Fit Index (CFI) = 1.000; Root Mean square Residual (RMR) = 0.022; Root Mean Square Error of Approximation (RMSEA) = 0.000.

Conclusion

- The theoretical framework of RA-ASPC was in line with internationally recognized core functions of primary care. Good psychometric properties of RA-ASPC proved its appropriateness in assessing quality of primary care from patients' perspectives in China.