

Risk Stratification Index & Risk Prevention Social Index: Test-retest reliability of translated screening tools for low back pain

Introduction

- Low back pain (LBP) is a very prevalent, and one of the most disabling, health issues worldwide^{1,2}.
- The Risk Stratification Index (RSI) is a screening tool which assesses the risk (low or high) of LBP becoming chronic within one year¹.
- The Risk Prevention Social Index (RPI-S) complements the RSI and identifies individual psychosocial risk profiles for LBP in the areas distress, pain experience, social environment and medical care environment¹.
- Both German screeners have been validated in previous studies^{1,2}.
- The RSI and RPI-S can contribute to the prevention and appropriate treatment of low back pain, but their usability is limited due to the availability in only one language (German).
- The aim of this study was to assess the test-retest reliability of the translated RSI and RPI-S into English.

Methods

- The original RSI and RPI-S were translated from German to English (Figure 1). Several questions in the RSI or RPI-S stem from other validated German questionnaires and their English validated counterparts were included in the English translations of RSI and RPI-S. If a validated English counterpart did not exist, the German question was translated into English by a bilingual speaker.

RSI & RPI-S Translation procedure

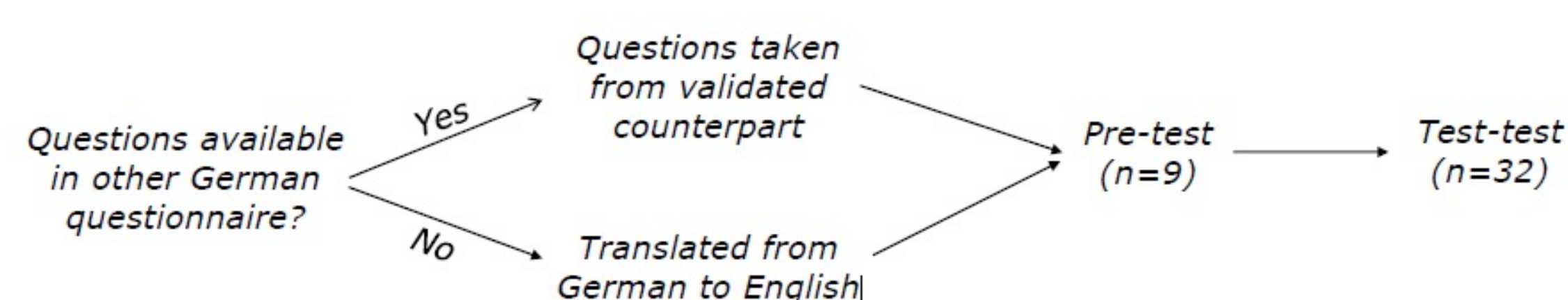


Figure 1: The Risk Stratification Index (RSI) and Risk Prevention Social Index (RPI-S) translation procedure.

- A pre-test of the comprehensibility of the translated questions was conducted with a native English speaking sample ($n=9$).
- Participants were native English speakers, aged 18 – 65 years, with or without LBP, recruited through emails and social media.
- Both questionnaires were filled out twice (T0 and T1), with one week in between (Figure 2).

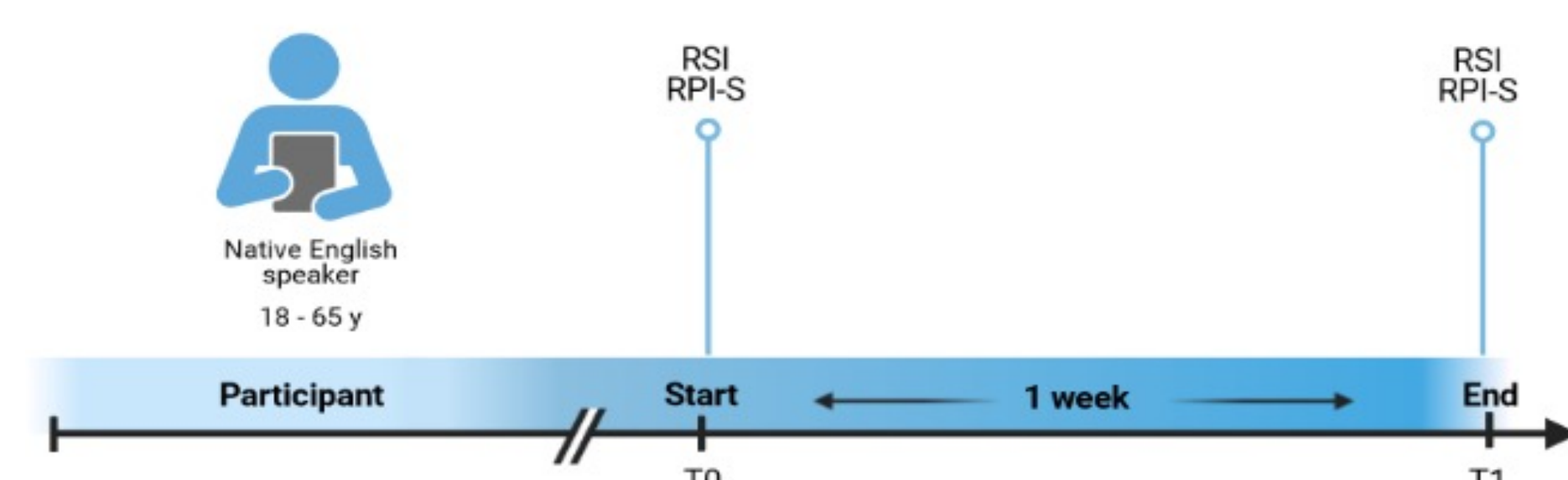


Figure 2: Representation of the test-retest procedure.

- Statistics: The Intraclass Correlation Coefficient (ICC; two-way mixed) and Spearman correlation (ρ) were calculated to perform test-retest analyses for the following (sub)scales: Chronic Pain Grade (CPG) questionnaire and RSI within subscales characteristic pain intensity (CPI) and disability (DISS); the RPI-S within subscales CPI and DISS, and in the further domains distress, pain experience, social environment, and medical care environment.

Results

- A total of 32 participants (age ($M \pm SD$): 22.5 ± 4.9 y) answered the translated CPG, RSI and RPI-S questionnaires at two time points.
- The results of the test-retest analyses (Spearman coefficient; ICC) are presented in Figure 3. All Spearman correlations were $r > 0.700$ and the $ICC > 0.800$ (all significant ($p < 0.01$)).

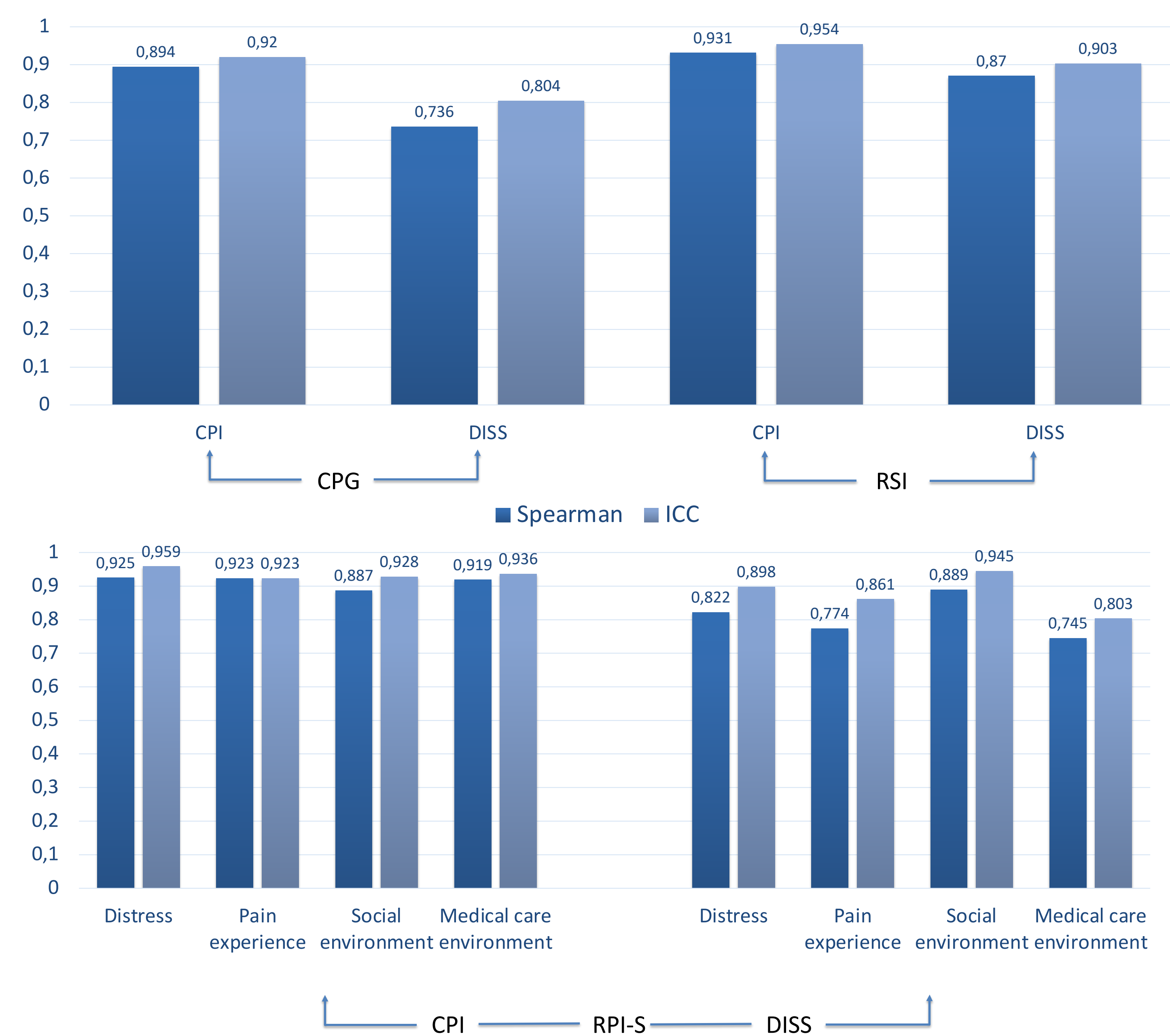


Figure 3: Results of the conducted test-retest analysis (Spearman and Intraclass Correlation Coefficient).

ICC: Intraclass correlation coefficient, CPG: Chronic Pain Grade, CPI: characteristic pain intensity, DISS: pain disability, RSI: Risk Stratification Index, RPI-S: Risk Prevention Social Index

Discussion

- The English translations of the RSI and RPI-S show a good ($r > 0.700$; $ICC > 0.750$) test-retest reliability^{3,4}.
- Yet, the sample size is limited and not all participants answered all questions on both screening tools.
- Nonetheless, both translated screeners could be implemented in LBP clinics of English speaking countries, to assess risk domains and prescribe accurate therapy forms for low back pain.

Literature

- Wippert et al. (2017). Development of a risk stratification and prevention index for stratified care in chronic low back pain. Focus: yellow flags (MiSpEx network). *Pain Reports*, 2 (6).
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