

# Translation and validation of the Perceived Locus of Causality Questionnaire (PLOCQ) in a sample of German physical education students

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## Introduction

Grounding in the theoretical foundations of Self Determination Theory (SDT; Deci & Ryan, 1985, 2000), the Perceived Locus of Causality questionnaire (PLOCQ; Goudas, Biddle & Fox, 1994) is one of the most commonly used questionnaires to assess different forms of the SDT behavioral regulation spectrum. Despite the frequent use of the PLOCQ, no German version currently exists. Furthermore, given the shortage of SDT-based questionnaires that include a factor of integrated regulation, there is a need to evaluate items designed to measure integrated regulation. Consequently, the overall aim of this study was to translate and validate a German version of the PLOCQ that includes a measure of integrated regulation.

## Methods

The sample consisted of 223 students ( $n = 111$  girls; mean age = 15.70 years,  $SD = 1.48$ ) from different German secondary schools. After translation and back translation of the PLOCQ, four items assessing integrated regulation from the German version of the Behavioral Regulation in Sports Questionnaire (BRSQ; Lonsdale, Hodge & Rose, 2008; Kleinert & Pels, 2013) were added. In order to evaluate the psychometric properties, internal consistencies were calculated and a confirmatory factor analysis (CFA) was conducted using IBM SPSS Statistic 25 and IBM SPSS Amos 25. To determine the scale's construct validity, task and ego orientations in sports (Rethorst & Wehrmann, 1998) and factors of the intrinsic motivation questionnaire (enjoyment, perceived competence, perceived choice, pressure; Wilde et al., 2009) were correlated with the PLOCQ's factors.

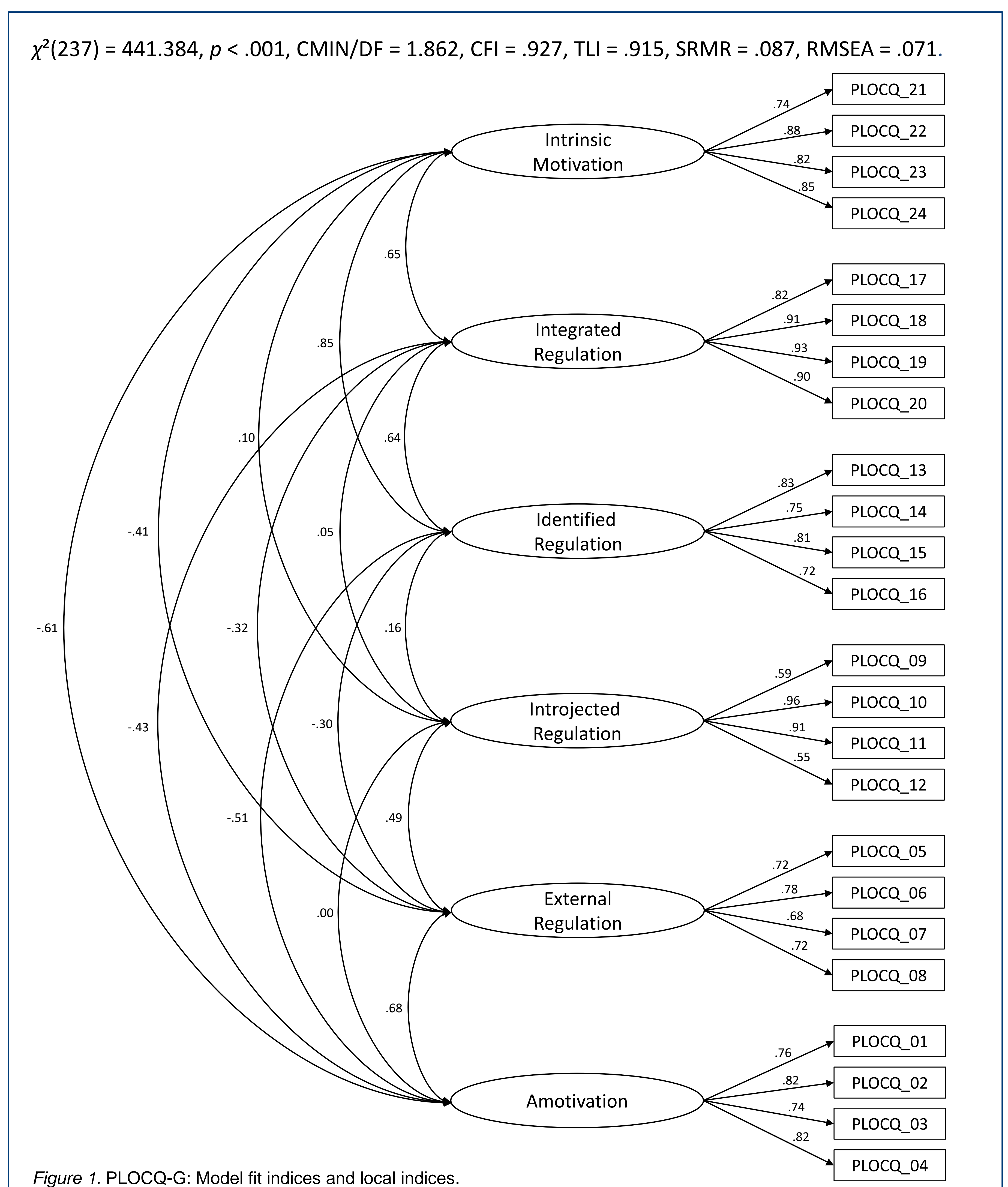
## Results & Discussion

Alpha values for all factors were good to excellent (Cronbach's Alpha .80 - .93). The factor loadings were satisfactory, except for two items of the factor introjected regulation. The CFA provided support for the six factor and 24 item model (values shown in figure 1). Inter-correlations among the factors were all consistent, except for introjected regulation.

Analyses of construct validity showed that the more autonomous regulations were positively correlated with task orientation, enjoyment, perceived competence and perceived choice. Positive correlations were also found between the more controlled regulations and pressure. Furthermore, weak correlations were found between ego orientation and the more autonomous regulations. Unexpected weak or negative correlations were revealed between ego orientation and the more controlled forms.

It can be assumed that the data mirror the six-factor structure of SDT well.

Future research in the PE context should consider to modify the factor introjected regulation to gain better local dimensions and consistent inter-correlations with identified regulation. Overall, this study showed that the PLOCQ-G has good psychometric properties and can be used for assessing behavioral regulation in German PE classes.



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