

The dimensionality of the Brief Self-Control Scale—An evaluation of unidimensional and multidimensional applications



Christoph Lindner*, Gabriel Nagy, Jan Retelsdorf

Leibniz Institute for Science and Mathematics Education, Kiel, Germany

ARTICLE INFO

Article history:

Received 7 May 2015

Received in revised form 2 July 2015

Accepted 4 July 2015

Available online 17 July 2015

Keywords:

Brief self-control scale

BSCS

Dimensionality

Confirmatory factor analysis

Validity

Trait self-control

ABSTRACT

The widely-used Brief Self-Control Scale (BSCS) is usually applied as a unidimensional measure of trait self-control. However, there is no clear empirical evidence for the scale's unidimensional structure, while different multidimensional conceptualizations of the BSCS have recently been suggested. The authors of those multidimensional models used different BSCS item subsets to specify distinct facets of self-control in order to enhance the representation of the scale's internal structure or to increase the instrument's efficiency in predicting various outcomes. Up until now, little is known about the relative performance of these conceptualizations. In this article, we compare three two-dimensional representations of the BSCS with the unidimensional measure in two samples of university students ($N = 205$) and apprentices in vocational education and training ($N = 1951$). Of the two-dimensional models only the one that separates positively and negatively worded items showed a consistent improvement in model fit in both samples, compared to the unidimensional model. However, in comparison to the unidimensional measure, the two-dimensional measures did not substantially enhance the predictive power concerning outcome variables in either sample. We conclude that the BSCS's total score is a viable option for assessing trait self-control and for studying its relationship with achievement-related outcome variables.

© 2015 Elsevier Ltd. All rights reserved.

1. Introduction

The Brief Self-Control Scale (BSCS; Tangney, Baumeister, & Boone, 2004) is one of the most widely used instruments for measuring general trait self-control (TSC) in different fields of psychological research. Compared with the long version of the scale, researchers often prefer the economic 13-item BSCS. Accordingly, more than 100 published studies on adolescents, students, apprentices, and adults (Baay, De Ridder, Eccles, Van der Lippe, & Van Aken, 2014; De Ridder, Lensvelt-Mulders, Finkenauer, Stok, & Baumeister, 2012) have shown that the overall scale's score is useful for predicting a variety of behavioral outcomes. However, although Tangney et al. (2004) proposed using the BSCS as a unidimensional instrument, there is a lack of empirical evidence for the scale's one-factor structure. Therefore, several authors (De Ridder, De Boer, Lugtig, Bakker, & Van Hooft, 2011; Ferrari, Stevens, & Jason, 2009; Maloney, Grawitch, & Barber, 2012) proposed multidimensional conceptualizations of the BSCS for assessing distinct facets of TSC. They suggested that these multidimensional specifications provide better representations of the scale's internal structure and increased the instrument's power to predict behavioral and psychological outcomes. In this article, we evaluate and compare the unidimensional BSCS (Tangney et al., 2004) and three multidimensional conceptualizations

of the scale (De Ridder et al., 2011; Ferrari et al., 2009; Maloney et al., 2012) by examining the factorial structures and the suitability of facet scores for predicting academic and vocational outcomes.

1.1. The dimensionality of the Brief Self-Control Scale

The development of the Self-Control Scale (SCS; 36 items) and the corresponding BSCS (13 items; Fig. 1A) was guided by a broader but unitary conception of TSC as “the self's capacity to override or change one's inner responses, as well as to interrupt undesired behavioral tendencies and to refrain from acting on them” (Tangney et al., 2004, p. 274). In their study, the authors conducted exploratory factor analyses (EFA) and identified five distinct factors for the SCS; however, the extracted factors did not improve the instrument's predictive power for external criteria. Therefore, the authors suggested using the total score for the long and brief version (Fig. 1A) of the scale in research settings.

Ferrari et al. (2009) applied EFA and extracted two factors (Fig. 1B) labeled as *general self-discipline* (9 items) and *impulse control* (4 items). The authors describe impulse control as the resistance to short-term rewards or temptations in order to achieve long-term goals, whereas self-discipline focuses on general patterns of behavior. Both facets appeared to be differently related to abstinence time in alcohol and drug consumption and were further used in subsequent investigations of substance abuse recovery (e.g., Ferrari, Stevens, & Jason, 2010; Ferrari, Stevens, Legler, & Jason, 2012). It should be emphasized that all items that

* Corresponding author at: Leibniz Institute for Science and Mathematics Education, Olshausenstraße 62, 24118 Kiel, Germany.

E-mail address: clindner@ipn.uni-kiel.de (C. Lindner).

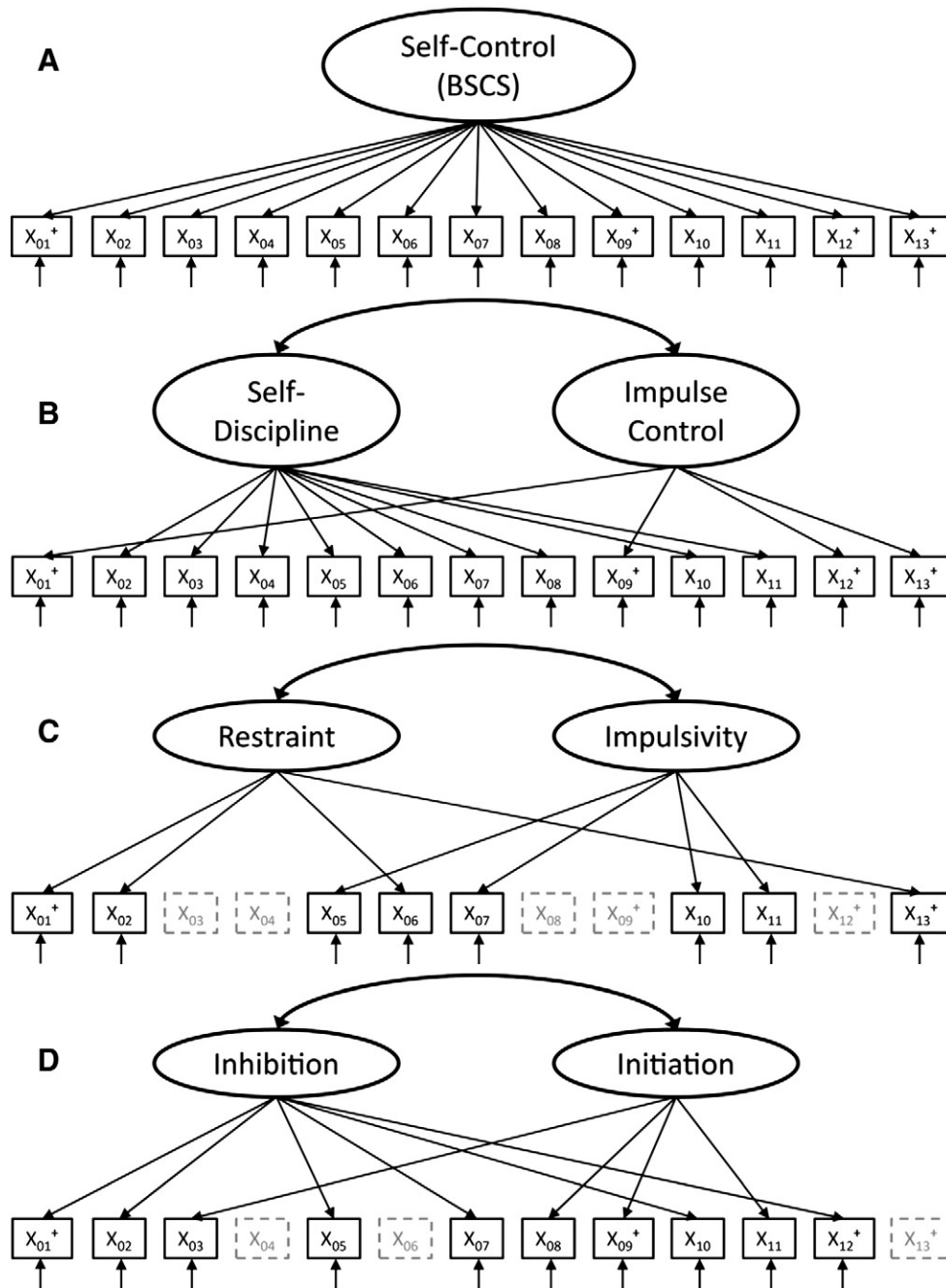


Fig. 1. BSCS conceptualizations proposed by A: Tangney et al. (2004); B: Ferrari et al. (2009); C: Maloney et al. (2012); D: De Ridder et al. (2011). Gray dotted blocks indicate excluded items. + indicates positively phrased items.

Ferrari et al. (2009) identified as indicators of impulse control are positively worded (Fig. 1B), whereas the items that indicate general self-discipline are negatively worded. Thus, their two-dimensional solution might reflect wording effects (e.g., Benson & Heccevar, 1985; Hankins, 2008) rather than substantively interpretable TSC facets.

Maloney et al. (2012) also applied EFA, identified two facets for the BSCS (Fig. 1C) and interpreted them as reflecting Carver's (2005) conceptualization of *restraint* (4 items)—the tendency to be deliberative or disciplined and engage in effortful control—and *impulsivity* (4 items)—being spontaneous and acting on intuition or heuristics. Note that the authors excluded five items and used only item subsets of the original instrument to assess the postulated factors. In their study, both facets showed distinct correlational patterns with exhaustion and counterproductive workplace behavior.

Another two-dimensional BSCS specification (De Ridder et al., 2011)¹ was influenced by Gray's (1994) theory that postulates two systems for self-regulation: the *Behavioral Inhibition System* and the *Behavioral Activation System*. For their conceptualization, De Ridder et al. (2011) rated and categorized BSCS items with respect to inhibitory and initiatory self-control. *Inhibition* (6 items) refers to the ability to refrain from immediate impulses, whereas *initiation* (4 items) indicates the ability to start goal-directed behavior. As shown in Fig. 1D, the authors discarded three items that could not be classified. Inhibition

¹ De Ridder et al. (2011) explicitly mention that they used BSCS items to examine the validity of the underlying conceptual structure of self-control in terms of specific components. Their intention was not to criticize the BSCS as a measure of generic self-control, but to explore specific facets for developing new measures.

Download English Version:

<https://daneshyari.com/en/article/890016>

Download Persian Version:

<https://daneshyari.com/article/890016>

[Daneshyari.com](https://daneshyari.com)