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Measuring self-esteem instability through a single-administration scale: Still a fruitless endeavor?

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ABSTRACT

Studies on self-esteem instability (SEI) must obtain multiple measurements of self-esteem, such as daily for two weeks, to calculate SEI. This measurement method is called the "gold standard." The intensive nature of the gold standard forces SEI be studied through multiple-day, controlled, student-sample designs, which restricts generalizability and possible variables studied. We attempt to address these concerns through creating a new single-administration SEI scale, called the SEI Measure (Studies 1 and 2), and analyzing the relationship of the SEI Measure and prior single-administration SEI scales with the gold standard (Studies 3 and 4). The SEI Measure and existing scales only have moderate correlations with the gold standard, suggesting that they do not adequately gauge SEI. As these studies are the most robust investigation into single-administration SEI scales to date, we suggest that the study of such scales should be refocused, and our results also provide direction for new research avenues. Innovative single-administration SEI measures, such as implicit measures, may still adequately gauge SEI, and authors should consider perceived SEI separately from SEI itself. Perceived SEI may be an important aspect of self-perceptions that leads to distinct personal outcomes that are not predicted by SEI or other commonly studied variables.

Self-esteem is one of the oldest (Nicole, 1696) and widest (Myers, Willse, & Villalba, 2011) studied constructs in psychology, and it influences a wide array of outcomes significant to daily life, such as depression and life satisfaction (Brown, Andrews, Harris, Adler, & Bridge, 1986; Meier, Semmer, & Hupfeld, 2009; Milevsky, Schlechter, Netter, & Keehn, 2007). One's amount of self-esteem, however, is not the only aspect of self-esteem that influences personal outcomes. Self-esteem instability (SEI; also called stability or variability) also has important psychological implications that are largely independent of one's amount of self-esteem (Chabrol, Rousseau, & Callahan, 2006; Kernis & Waschull, 1995; Okada, 2010). Research has shown SEI to incrementally predict depression and life satisfaction, among several other outcomes, beyond self-esteem itself (De Man, Gutiérrez, & Sterk, 2001; Meier et al., 2009; Oosterwegel, Field, Hart, & Anderson, 2001).

Traditionally, SEI has been operationalized as the variations between repeated measurements of self-esteem, often calculated through within-person standard deviations from self-reported scales administered over the course of several days (Kernis, 2005; Kernis, Cornell, Sun, Berry, & Harlow, 1993; Kernis & Waschull, 1995). Some studies have gauged SEI through administering a survey every day for a week (Kernis, Grannemann, & Barclay, 1989), whereas others have opted for more measurement occasions and administered two surveys every day across two weeks (Zeigler-Hill, 2006). Nevertheless, of all existing studies, most SEI research has been limited to multiple-day studies in largely controlled settings, due to the need for extensive repeated measurements. Further, the vast majority of these studies have solely used student samples, as student samples are much easier to obtain for intensive repeated measurements compared to adult or specialized samples.

This restriction to multiple-day, controlled, student-sample studies limits the validity and generalizability of all SEI research. A history of authors have noted concerns with such studies, particularly in regards to external validity (Cook et al., 1979; Shadish, Cook, & Campbell, 2002). Without more naturalistic studies, which can ensure adequate external validity, any observed results cannot be certain to apply to real-world settings. Also, the methodological restrictions to SEI research limit the possible variables that can be studied. For example, it is very difficult to observe the effects of SEI on workplace outcomes, such as performance and job satisfaction, and the same is true for other variables that are largely limited to adult populations. In the current article, we aim to address the limited nature of SEI research due to measurement constraints.

Our primary objective is to create a single-administration scale of SEI. While the study of SEI requires the repeated measurement of self-esteem, it may be possible to create a single-administration measure of *perceived* SEI that adequately converges with the traditional

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measurement of SEI. Such a scale could allow for the study of SEI using alternative research designs, particularly those with superb external validity. Further, the scale could be applied in a broader range of contexts than currently possible in SEI research, including more naturalistic settings, and it could be used to study a broader range of variables. In fact, the scale may even open completely new areas of research for SEI, such as investigating the influence of SEI on workplace outcomes. Therefore, existing areas of study could be more robustly investigated, and new areas of study could be opened through the creation of a single-administration SEI scale.

Our secondary objective is to reanalyze three existing single-administration SEI scales (Chabrol et al., 2006; Kernis, Grannemann, & Barclay, 1992; Rosenberg, 1965). Each of these measures have certain noteworthy concerns, such as their small relationships with the traditional measurement of SEI, but much is still unknown about their psychometric properties and/or other aspects of validity. Through investigating these aspects, important information may be uncovered about the ideal methods to gauge SEI through a single-administration scale. Likewise, it may be possible that prior concerns with these scales are unfounded, and they are adequate measures of SEI. If so, the current article could aid the study of SEI through encouraging future use of these potentially underutilized measures, achieving all the benefits of creating a new scale altogether.

Most importantly, however, the analyses of the new and existing scales may provide definitive evidence regarding the ability of SEI to be gauged through a single-administration scale. While prior analyses of the individual scales have uncovered concerning features, it is possible the SEI is simply unable to be gauged through a single-administration scale. In these prior analyses, researchers could not differentiate the concerning aspects from the scale and the nature of the construct itself. Only through an omnibus analysis of all the scales, as done in the current article, can clear inferences about this research question be achieved. Therefore, while the current article is framed through the lens of scale development and (re)analysis, it is also an investigation into the nature of SEI.

To achieve these goals, the current article is organized as such: First, we provide a review of SEI and its measurement. Second, we present a series of studies that creates a new single-administration measure of SEI. Third, in two separate studies, we test the convergent validity of the new and existing measures of SEI with the traditional method of gauging the construct. Fourth, we discuss the implications of the results for research and practice.

1. Background

1.1. Self-esteem instability and the gold standard

Self-esteem is often considered to be a primary indicator of psychological health, and those with high self-esteem are seen as more mentally fit (Sedikides, Rudich, Gregg, Kumashiro, & Rusbult, 2004; Taylor & Brown, 1988; Wilkinson, 2004). The construct has been shown to be a resilient barrier to negative events, preventing stress, depression, and anxiety (De Cremer, 2002; Meier et al., 2009; Zeigler-Hill & Showers, 2007), among other detrimental personal outcomes (Cassidy, O'Connor, Howe, & Warden, 2004; Myers & Rosen, 1999; Stokes & Peterson, 1998). Due to the focus on psychological health in self-esteem research, similar relationships have also been studied in regards to SEI.

SEI is the, "propensity to exhibit variability in self-feelings across time" (Kernis et al., 1993, p. 1190). Although related, SEI is not entirely dependent on self-esteem. That is, both those with high and low self-esteem can express both high and low SEI. Also, as suggested by Kernis et al. (1993), SEI is "a dispositional quality that interacts with contextual factors to produce specific patters of fluctuations [in self-esteem]" (p. 1190). The construct likely arises from a variety of personal attributes that determine reactions to external events (i.e. salient self-identities, sensitivity to evaluations, source of self-esteem), and SEI is believed to be a relatively stable personality trait (Chabrol et al., 2006; Kernis et al., 1992; Rosenberg, 1965).

Further, research has likewise shown SEI to be related to many of psychological health outcomes. Like self-esteem, SEI is related to stress, depression, and anxiety (Kernis et al., 1993; Roberts, Kassel, & Gotlib, 1995), and it has also been linked to the ultimate outcome of poor psychological well-being, suicide (de Man & Gutierrez, 2002). Research has also linked SEI to various aspects of interpersonal interaction, particularly experienced social anxiety and emotional reactions to (dis)approval (Crocker, Luhtanen, Cooper, & Bouvrette, 2003; Kernis et al., 1993; Seery, Blascovich, Weisbuch, & Vick, 2004), suggesting that SEI may be a contributor to certain social tendencies or even phobias.

When reviewing these and other studies, however, the scope of SEI research is notably limited. Although extremely important, the majority of studies only investigate the relationship of SEI with psychological health outcomes. While this topic may be the primary focus of research on self-esteem and SEI, the former construct has also been applied in much wider contexts. For example, authors have studied the relationship of self-esteem with several aspects of work, such as employee performance and job satisfaction (Judge & Bono, 2001; Judge, Erez, & Bono, 1998); other individual differences, placing self-esteem in the larger nomological network of related constructs (Baumeister, Smart, & Boden, 1996; Scheier, Carver, & Bridges, 1994); and an array of theories, many created for the specific purpose of understanding self-esteem (Greenberg, Pyszczynski, & Solomon, 1986; Leary & Baumeister, 2000). Alternatively, very few similar studies have been performed on SEI. The limited nature of SEI research may be due to the required measurement method for the construct, which may be preventing SEI from becoming as widespread in research as self-esteem itself.

The traditional method to gauge SEI is to administer several iterations of the Rosenberg Self-Esteem Scale (RSES; Rosenberg, 1965), which is a general measure of global self-esteem. The RSES consists of ten questions, including "All in all, I am inclined to feel that I am a failure" and "I take a positive attitude towards myself." Further, the scale's instructions can be modified to instruct participants to report "how they feel in general" or "how they feel in the present moment," whereas the latter is typically used in SEI research.

To gauge SEI using the RSES, the scale is administered multiple times over the course of several days, and the standard deviation of these scores is considered to be representative of the construct (Kernis, 2005; Kernis & Waschull, 1995; Kernis et al., 1993). In current research, there is no standard duration to administer the multiple iterations of the RSES. Previous studies have used every day for one week (Kernis et al., 1989), twice a day for four days (Kernis et al., 1992), twice a day for two weeks (Zeigler-Hill, 2006), and several others (Kernis, 2005; Kernis & Waschull, 1995; Kernis et al., 1993). In general, however, researchers administer surveys daily or twice daily for one or two weeks. This method of measuring SEI has been called the "gold standard" (Chabrol et al., 2006), and we also use this terminology.

While the gold standard is believed to be effective and accurate, it creates certain limitations in SEI studies. First, the reliance on studies lasting multiple days or weeks slows the progress of SEI research. Whereas studies on other constructs can apply speedier methods, such as cross-sectional designs, no such luxury is available for SEI research. Further, although cross-sectional designs have notable limitations, they are able to provide initial inferences about research questions, which may be replicated using more advanced methodological designs (Cook et al., 1979; Shadish et al., 2002). These initial inferences are unable to be discovered in SEI studies, preventing researchers from inferring which research questions may be most valuable to pursue. This may cause some researchers to be hesitant to study SEI.

Second, SEI studies are largely limited to relatively controlled settings. Currently, when obtaining repeated measurements, some studies require participants to complete daily surveys in a lab or classroom