The Revised Spontaneity Assessment Inventory (SAI-R): Spontaneity, Well-Being, and Stress

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ABSTRACT. The authors studied the construct validity and reliability of a revised version of the Spontaneity Assessment Inventory, the SAI-R. Compared with the original version of the inventory (D. A. Kipper & J. Hundal, 2005) the revised version is slightly shorter, containing only 18 items, and is arranged on a 5-point Likert scale rather than a 6-point scale as in the SAI. The authors administered the SAI-R, the Friedman Well Being Scale (FWBS; P. H. Friedman, 1994), and the Perceived Stress Scale (PSS; S. Cohen, T. Kamarck, & R. Mermelstein, 1983) to 105 adults. The results showed a statistically significant positive correlation between the SAI-R and the FWBS. Also, the SAI-R correlated negative with the measure of stress (FSS) and, as expected, the FSS correlated negatively with the FWBS. The Cronbach's alpha reliability coefficient was .79.

Keywords: spontaneity measure, stress, well-being

THE IDEA OF MEASURING SPONTANEITY in the form of an action-based *spontaneity test* was introduced by Moreno (1944) more than 6 decades ago. The test consisted of a series of staged situations (scenes) that were not necessarily standardized, to which a single protagonist had to provide unrehearsed, impromptu responses. Observers watched and rated the responses for adequacy, novelty, and speed, and their evaluations formed what Moreno called a *spontaneity quotient.* Proposing such a test reflected awareness for the need to have a psychometrically valid measure of spontaneity. Albeit an inexact and impractical assessing procedure, it remained the only available measure of spontaneity for decades.

There are several reasons to construct a standardized measure of spontaneity. First, spontaneity is a fundamental concept in the theory of psychodrama. It serves as the rationale for several of its predictions. The theory predicts that spontaneity leads to, or is associated with, good mental health, and that *tele,* the force that attracts people to each other, requires relationships based on spontaneity (Moreno, 1964). The absence of an assessment procedure for spontaneity makes it impossible to empirically investigate the veridicality of these and other hypotheses. Second, spontaneity has served as a yardstick for measuring therapeutic progress. The absence of a means for demonstrating improvement in spontaneity (or the lack thereof) would render the concept inapplicable as a sound clinical tool. Third, spontaneity is characterized as energy that cannot be seen by the naked eye (Kipper, 1967, 1986; Moreno, 1964). Therefore, its existence must be inferred from a concrete carrier which, in the tradition of psychodrama, has been defined as the person's response(s) to a situation (Kipper, 1967). According to Moreno (1964), the determination of whether or not a given response conveyed spontaneity lies in its appropriateness and its novelty. However, there have been no suggestions as to how one can reliably assess these two facets of spontaneity. The criterion for measuring appropriateness may be an imprecise assessment, and determining the degree of the novelty of the response depends primarily on the client's subjective memory as to whether or not the response is new, rather than on the objective evaluation of an external assessor. In fact, it is surprising that the idea of measuring spontaneity remained unheeded for so long.

During the past 10 years, a new research effort appeared in the area of spontaneity assessment marked by the publication of three studies describing two standardized paper and pencil measures of spontaneity. The first measure was the Personal Attitude Scale (PAS; Collins, Kumar, Treadwell, & Leach 1997) a paper-and-pencil inventory that includes 58 items. The PAS has been revised and is now called the PAS-II (Kellar, Treadwell, Kumar, & Leach, 2002). The revised version contains 66 items and shows initial encouraging construct validity and good reliability. The items that comprise both the PAS and its revised version stem from the authors' survey of the spontaneity literature. Their effort revealed the following six characteristics of spontaneous behavior: "(a) it is novel and creative, (b) it is immediate, (c) it is adequate and appropriate, (d) it occurs easily and effortlessly, (e) the individual acts with total involvement, and (f) the individual is in control of his or her actions, which are not impulsive" (Kellar et al., p. 37).

Another measure of spontaneity is the Spontaneity Assessment Inventory (SAI) designed by Kipper and Hundal (2005). The SAI poses the question, "How strongly do you have these feelings and thoughts during a typical day?" The question is followed by 20 items that describe feelings and thoughts that characterize the state of being spontaneous (e.g., "energized," "uninhibited," "in control,"

"happy"). The items are arranged on a 6-point Likert scale from 1 (*none*) to 6 (*very strong*). The SAI correlates positively with measures of well-being (Friedman, 1994). It correlates negatively with state and trait anxiety (Spielberger, Gorsuch, Lushen, Vagg, & Jacobs, 1983), obsessive-compulsive behavior (Foa, et al., 2002), and past orientation as measured by the Temporal Orientation Scale (TOS; Jones, Banicky, Pomar, & Lasane, 2004). Christoforou and Kipper (2006) found that the SAI showed good split–half and test–retest reliability coefficients.

In the present study we introduce a slightly revised Spontaneity Assessment Inventory designated as the SAI-R. The revision includes (a) a reduction of the items from 20 to 18 and (b) a change in the range of possible responses from a 6-point to a 5-point Likert scale. We deleted two items because they were idioms that most likely could not be translated into other languages. Retaining these items in the inventory would have prevented it from being used in cross-cultural studies, an unnecessary handicap. We changed the range of the response scale from an even number (6-point scale) to an odd number (5-point scale) in response to a criticism that an even number of response options forces the respondents to choose between being spontaneous or being nonspontaneous. In contrast, an odd number of response options offers a middle-point option such as neither weak nor strong, for respondents who might have difficulty characterizing their feelings as spontaneous or not.

Perhaps the most important proposition in Moreno's approach to psychotherapy is the claim that spontaneity leads to psychological health (Moreno, 1923, 1953). The absence of empirical validation of this assertion casts a serious question about the theoretical foundation of classical psychodrama (Moreno, 1953, 1964). Other theoreticians also have noted the association between spontaneous behavior and mental health, though they may have not always used the term *spontaneity*. For example, Steitzel and Hughey (1994) regarded spontaneity to be a necessary state of mind responsible for experiencing joy and deep satisfaction. Maslow (1970) considered the ability to be spontaneous to be a necessary condition toward attaining self-actualization.

In view of the importance of the association between spontaneity and well-being, we plan to reaffirm the relation using the SAI-R. Kipper and Hundal (2005) reported that the original SAI was positively correlated with various dimensions of well-being, thus lending empirical credence to Moreno's basic proposition. The present study is designed to reexamine this relation using the SAI-R. We hypotheize that the SAI-R will also be positively correlated with dimensions of well-being.

In pursuit of further construct validity of the SAI-R, we also propose to investigate the relation between spontaneity and stress. Substantial evidence connects levels of stress to diminished physical and psychological well-being (e. g., Bengston, Reedy, & Gordon, 1985; Catz, Felton, & McClure, 2002; Daley, Hammen, Davila, & Burge, 1998; Davis, McKey, & Eshelman, 2000;

Pearlin, Menaghan, Lieberman, & Mullan, 1981; Post et al., 1996). Moreno (1964) regarded stress and anxiety as the opposite of spontaneity. Therefore, we predict that the SAI-R will correlate negatively with a measure of stress.

Method

Participants

Participants were 105 adults (38 men, 67 women) from the San Diego, CA, area. They ranged in age from 18–69 years ($M = 35.76$, $SD = 9.43$). A detailed description of the demographic characteristics of the sample is presented in Table 1. We selected the participants through convenient sampling. The second author approached participants at their places of work and asked them to participate in the study. The workplaces included offices and schools that the second author was able to gain access to through personal connections. All participants volunteered to take part in the study and signed a consent form that explained they were at liberty to withdraw from the study at any time without penalty. Participants received no compensation, financial or otherwise, for their participation in the study.

Measures

The Revised Spontaneity Assessment Inventory. The SAI-R is a self-report inventory designed to measure the intensity of the presence of spontaneity. Like the original SAI (Kipper & Hundal, 2005), it poses the question: "How strongly do you have these feelings and thoughts during a typical day?" The

TABLE 1. Demographic Characteristics of the Participants

Variable	*n*	*M*	*SD*
Age (in years)			
Women	67	36.10	9.98
Men	38	35.15	8.48
Total sample	105	35.76	9.43
Level of education (years)			
Women		16.18	2.51
Men		16.08	3.29
Occupation			
Graduate students	10		
Computer engineers	17		
School teachers	35		
Stay-at-home parents	43		

question is followed by a list of 18 adjectives and phrases describing various feelings and thoughts such as "happy," "alive," "energized," "uninhibited," "Do whatever, within limits," and "free to act, even outrageously." The participants respond by rating each item on a 5-point Likert type scale ranging from 1 (*very weak*) to 5 (*very strong*).

As previously noted, the SAI-R is a slight modification of the original version of the SAI (Christoforou & Kipper, 2006; Kipper & Hundal, 2005). The original SAI contained 20 items with responses arranged on a 6-point Likert scale. The SAI correlates positively with a measure of well-being (Kipper & Hundal) and with present time orientation, and correlates negatively with state and trait anxiety and obsessive compulsive tendency (Christoforou & Kipper), The reported split-half reliability for the SAI is $r = .88$ and the test-retest reliability with a 5-week interval yielded $r = .75$.

The Friedman Well-Being Scale. The Friedman Well-Being Scale (FWBS; Friedman, 1994) is a self-report scale designed to measure well-being. It consists of a series of 20 opposite adjectives (e.g., angry vs. calm), designed to measure adult well-being. Respondents rate themselves by indicating the extent that each of the adjectives applies to them using a 10-point semantic differential-type scale. The rating ranges from 1 (e.g., *very angry*) to 10 (e.g. *very calm*). The FWBS contains five subscales as follows: Emotional Stability (ES; 10 items); Self-Esteem/Self-Confidence (SE; 3 items); Joviality (JO; 3 items); Sociability (SO; 3 items); and Happiness (HA; 1 item). The scale provides both a total score reflecting the Freidman Well Being Composite (FWBC) and separate scores for each of its subscales. The reported internal consistency reliability estimates of the FWBC ranged from .92–.98. Split-half reliability with college students ranged from .69–.96. Test–retests of the FWBC scores ranged from .73 for students to .83 for patient samples. The FWBS manual reports more than 100 correlations with clinical indexes as well as with measures of personality and emotional stability.

The Perceived Stress Scale. The Perceived Stress Scale (PSS; Cohen et al. 1983) is a 14-item self-report inventory designed to measure the perceived level of stress brought on by the respondent's life situations. Cohen et al. reported the PSS to be sensitive to a variety of stressful situations including chronic stress; reactions emanating from anticipated or impending future stressful events; and reactions to specific, present stressful events. The items are easy to understand and are general in nature (e.g., "In the last month, how often have you been upset because of something that happened unexpectedly?"). The responses to each item are arranged on a 4-point Likert scale ranging from 1 (*never*) to 4 (*very often*). Half of the 14 items are phrased in reverse to prevent response–set reactions to the scale. The PSS addresses stress that occurred in the last month, thus focusing on events that are still affecting the respondent.

Cohen et al. (1983) reviewed three studies in which the PSS was administered to three large groups of students. They found statistically significant positive correlations between the PSS and levels of stress, depressive, and physical symptoms (*r*s = .52–.76). The PSS correlated positively with social anxiety and perceived stress in two college student samples (r = .37 and r = .48, respectively, *p*s < .01,). It also correlated positively with a sample of cigarette smoking students in that the more they smoked, the higher their PSS scores were. The Cronbach's alpha reliability coefficients were .84, .85, and .86 for those three samples.

Procedure

The participants were administered the three inventories individually. They took the three inventories home to complete and returned them to us the following day. The participants completed the inventories anonymously, disclosing only their gender, age, level of education, and career. The order of the three inventories in the package was altered for half of the participants.

Results

The range of SAI-R scores obtained by the entire group was 18–90 (M = 66.41, SD = 10.16, Md = 67). There were no statistically significant differences in the scores obtained by women (M = 65.80, SD = 9.29) and men (M = 67.50, SD = 11.59) on the SAI-R, $t(103) = -.82$, $p > .05$. We also found that participants' scores on the SAI-R did not correlate significantly with either age (r = .01) or level of education (r = .03). The Cronbach's alpha for the SAI-R was .79.

We hypothesized that the SAI-R scores would correlate positively and significantly with the total scores of the FWBS and with each of its subscales, and this prediction was confirmed. Table 2 presents the Pearson product–moment correlation coefficients between the SAI-R and the FWBS. Table 2 shows that the SAI-R scores correlated positively with the total FWBS as well as each of its five subscales.

These results are very similar to those reported by Kipper and Hundal (2005) regarding the relation between the original SAI and the FWBS. In Kipper and Hundal's study, the correlation coefficient between the SAI and the total FWBS was positive and statistically significant, r = .36, $p < .01$. In the present investigation there was a larger coefficient, r = .58, $p < .001$. Also, the correlations between the original SAI and the five FWBS subscales ranged from r = .38 to r = .60, almost identical to the range of correlations found in the present study with the SAI-R.

We also predicted that the SAI-R would correlate negatively with the PSS. Indeed, there was a statistically significant negative correlation between these

TABLE 2. Pearson Product–Moment Correlations Among SAI-R, FWBS, and the PSS Inventories

Measure	SAI-R	PSS
FWBSC (total scores)	.58	−.49
Sociability	.49	−.35
Self-esteem	.38	−.33
Jovialty	.56	−.30
Emotional stability	.45	−.44
Happiness	.52	−.44
PSS	−.45	

Note. $N = 105$. SAI-R = Spontaneity Assessment Inventory–Revised. FWBS = Friedman Well Being Scale (Freedman, 1994). PSS = Perceived Stress Scale (Cohen, Kamarck, & Mermelstein, 1983).
$p < .001$ for all correlations.

two measures, $r = -.45$, $p < .001$. The PSS was designed to measure stress; therefore, we expected it to correlate negatively not only with the SAI-R, but also with the FWBS. As predicted, the PSS did correlated negatively with each of the FWBS subscales and with the total FWBS (see Table 2).

Discussion

The finding that spontaneity is positively related to well-being and negatively related to stress provides empirical support for Moreno's (1964) theoretical proposition regarding the relation between spontaneity and mental health. The results are congruent with the fundamental position of psychodrama that helping clients become more spontaneous is a desired goal of the psychotherapeutic endeavor. The finding that spontaneity is negatively correlated with stress is also congruent with an essential component of psychodrama theory and its hypothesis of inverse relations between spontaneity and anxiety or depression (Moreno, 1964). Altogether, we found a triangular set of relations that fits the theoretical expectations: Spontaneity was positively related to well-being and negatively related to stress, and stress was negatively related to well-being.

The absence of a spontaneity measure has hindered progress in studying the effects of a high level of spontaneity (Kipper, 2000). However, it did not impede empirical investigations of psychopathology—research in what psychodrama practitioners describe as a low level of spontaneity or *robopathy*, a robot-like behavior or repetitive conduct marked by fear of change and innovation (Yablonsky, 1976). The study of psychopathology, in general, does not stem from, and need not rely on, Moreno's theory (1953, 1964). Because of

this, we did not pursue further validations of the Spontaneity Deficit Inventory (SDI) described in earlier studies (Christoforou & Kipper, 2006; Kipper & Hundal, 2005). On the whole, Moreno's theory is less concerned with pathology and focuses more on well-being and mental health. In this respect, the availability of a reliable and valid spontaneity measure such as the SAI-R opens a hitherto closed avenue of research into the positive aspects of spontaneity-based clinical (psychodrama) interventions.

Regarding gender difference, Collins et al., (1997), Kellar et al., (2002), and Kipper and Hundal (2005) reported that men scored higher on spontaneity than did women, although in the study by Kellar et al. the difference accounted for such a small percentage of the variance that the authors deemed it irrelevant. In the present study, we found no significant difference between the SAI-R scores of men and women, a similar finding to that reported by Christoforou and Kipper (2006) on the SAI. We are not aware of any theoretical considerations that would suggest gender differences in spontaneity. Therefore, the present outcome is reasonable.

Our findings regarding the reliability of the SAI-R are acceptable for research purposes and within the range commonly found for self-report personality measurements. Certain research design characteristics may have contributed to our results. First, previous researchers studying spontaneity assessment have used university students as participants, which may not accurately reflect the general population. Using a convenient sampling procedure, we drew the vast majority of our participants from the general population. From a sampling and generalization perspective, this was an advantage. Second, our participants took the inventories home to fill out and returned them the next day, rather than completing them on the spot. We have no reason to assume that this procedure skewed the results. In fact, one may argue that in so doing our participants had more time and attention to devote to the inventories, rather than filling them in haste. Nonetheless, this procedure differed from the administration of the tests in previous studies.

The SAI-R is a new spontaneity measure that shows promise. It provides opportunities for empirically studying propositions related to psychodrama theory.

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