

THE DIMENSIONS OF STATE BOREDOM: FREQUENCY, DURATION, UNPLEASANTNESS, CONSEQUENCES AND CAUSAL ATTRIBUTIONS

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ABSTRACT

Boredom is a common and pervasive feeling state that is believed to be associated with a variety of suboptimal outcomes in areas such as psychological adjustment, academic performance and occupational success. However, much of the evidence for these associations is based on studies that have relied less on measures of the actual experience of boredom (and how individuals might construe their boredom), and more on measures of the susceptibility to become bored. It is proposed that many of the current approaches to boredom research could benefit from the inclusion of a state-type, self-report measure that permits the assessment of an individual's cognitive representations of their boredom experiences (e.g. subjective frequency and duration of boredom episodes) during a circumscribed period in the individual's recent past. It is argued that without such a measure, it is not possible to reliably distinguish between the correlates of the personality trait of boredom proneness and the correlates of the actual subjective experience of being bored. It is also not possible to identify what aspects the boredom experience (e.g., the perceived frequency of boredom episodes vs. the perceived duration of boredom episodes) are associated with a particular outcome. A prototype of a state-type inventory of boredom experiences (State Boredom Measure) is described along with some preliminary information on its utility and psychometric properties.

Keywords: State Boredom, measurement, consequences and attributions.

INTRODUCTION

By and large, most researchers agree that the subjective experience of boredom results from an interaction between individual differences in the predisposition to perceive environments as monotonous (*i.e.*, the boredom proneness trait) and variations in the intrinsic capacity of environments to evoke feelings of sameness (*i.e.*, the boredom inducing potency of the environment) [Berlyne, 1970; Csikszentmihalyi, 2000; Fiske & Maddi, 1961; Mikulas & Vodanovich, 1993, O'Hanlon, 1981]. It therefore follows that it is possible for individuals to vary considerably in their daily experiences of boredom (*e.g.*, frequency and duration) solely as a consequence of variations in their average expectable environments (*e.g.*, a race car driver vs. an actuary). Although this type of trait-state distinction is commonly made in psychological literature, it is a distinction that is not always evident in boredom research. Indeed, it is not unusual to find the terms "boredom proneness" (*trait boredom*) and "boredom" (*presumably state boredom*) used interchangeably in the same article. However, it takes only a moment of reflection to realize that any serious study of boredom should strive to avoid as much as possible the conflation of the two constructs and their correlates.

There are now several well-validated psychometric scales such as the Boredom Proneness Scale (BPS; Farmer & Sundberg, 1986) and the Boredom Susceptibility Scale (BSS; Zuckerman & Link, 1971) that is routinely used to assess trait boredom. Indeed, the

development of the BPS, in particular, has been a major catalyst in the growth of research on boredom over the last 20yrs. By contrast, state boredom has been typically assessed using ad hoc, single-item measures that require the individual to indicate (usually on a Likert-type scale) the degree to which they currently feel bored. Moreover, except for the validation of studies of trait boredom measures, state boredom and trait boredom have seldom been assessed in the same study.

This tendency to obscure and largely ignore this trait-trait distinction in boredom research is unfortunate. One of the most obvious consequences is that despite the scores of papers that have been written about “boredom”, we know surprisingly little about the extent to which pathological gambling (Blaszczynski et al., 1990) depression, loneliness (Farmer & Sundberg, 1986) somatization (Sommers & Vodanovich, 2000) and the other negative outcomes associated with trait boredom are also associated with perceived exposures to various types and doses of boredom-inducing environments. So, for example, after controlling for differences in boredom proneness, should we expect that individuals who are employed in potentially boredom-inducing occupations (e.g., mail sorting at the post office) will also have a greater susceptibility to symptoms of somatization than individuals with interesting vocations? This is of course an empirical question, but that is precisely the point. On the basis of the boredom research that has been conducted to date, questions such as these cannot be answered in any satisfactory way. Moreover, determining whether prolonged exposure to intrinsically monotonous environments in otherwise low boredom prone individuals can produce high boredom prone correlates is not a mere academic exercise. Environments are usually easier to modify (or avoid) than personality traits, so there are possible practical and clinical implications as well.

EXPERIENCE SAMPLING AND THE STATE BOREDOM MEASURE (SBM)

Although the term state boredom is used in the current context to highlight a distinction that has been largely obscured in the boredom literature, it is important to appreciate what is actually being proposed. Conventional state measures like the Trait-State Anxiety Inventory (Spielberger, 1995) attempt, through a host of construct relevant questions, to accurately identify and label an individual’s subjective experience in the immediate present. This would also be useful information in the case of many boredom studies but it is not the focus of this article.

Instead, what is needed and what is being proposed, is a measure or inventory that would permit the sampling of an individual’s recollections and perceptions of boredom episodes during a circumscribed period of time. In other words, something akin to Experience Sampling (ES), which refers to the technique in which participants are contacted at random intervals via a pager or phone and asked to report on certain aspects of their subjective experience at that point in time (Csikszentmihalyi, 1987). However, there are some practical limitations to the ES approach, not the least of which is that it is an expensive, time-consuming and labor intensive methodology. There is also the problem of reactivity. It is difficult to imagine how random phone contacts with a participant would not alter the pattern and frequency of something like boredom. And finally, it is an approach that is limited by the extent to which the responses given can be colored by perspective. For example, the experience of being afraid may change quite radically once the circumstances that triggered the initial fear response are evaluated and filtered through memory and its attendant processes.

In an effort to circumvent some of the above mentioned constraints of the ES approach, we devised a brief self-report questionnaire called the State Boredom Measure (SBM) that is

designed to inventory an individual's recollections and thoughts about their boredom experiences during the recent past. Unlike the ES technique, the sampling of the experience is done by the individual, not by the researcher. Hence there are no claims made about the objectiveness of the information provided. On the other hand, it is assumed that what an individual feels or remembers about being bored (e.g., being bored a lot) is perhaps as important as the data derived from the real time tallying and assaying of an individual's boredom experiences.

The SBM consists of eight questions about different aspects of the boredom experience, each of which is associated with a seven-point Likert-type scale (see Appendix for full scale). The participant is asked to base his/her responses on their recollections about their boredom experiences during the preceding 14 days. The eight questions were created through a rational-theoretic process to form a group of four conceptual clusters or dimensions based on the assumption that judgments on these dimensions vary in meaningful ways with the subjective experience of boredom (see Table 1).

Table 1. The four conceptual clusters of the SBM

1	a. Frequency of Boredom Episodes of all types;
	b. Frequency of Episodes of Sustained Boredom;
2	a. Degree of Tolerance for Episodes of Sustained Boredom;
3	a. Attributions about the Causes of Boredom Episodes (Due to Physical circumstances/illness)
	b. Attributions about the Causes of Boredom Episodes (Due to Social and External Circumstances);
	c. Attributions about the Consequences of Boredom Episodes (Diminished Quality of Life).
4	a. Intensity of the associated Unpleasantness/Discomfort/Distress;
	b. Intensity of the associated Unpleasantness/Discomfort/Distress in comparison with memorial representations of past experiences of boredom.

Psychometric Properties and Correlates of the SBM

Administration and Scoring

Respondents are asked to use the 7-point scale to rate their recollections and judgments about their boredom experiences over the preceding two week period. Since each of the items on the measure sample conceptually different recollections or judgments about past boredom experiences, there is no provision made for an overall summary score. The responses to each of the eight items are therefore, recorded, reported and analyzed separately.

Reliability

Reliability was established using a sample of 160 adults, ranging in age from 24 to 65 ($M = 36.25$, $SD = 13.92$ (see Table 2 for demographic profile). Although the SBM does not have a formal summary score, it nonetheless demonstrates good internal consistency ($\text{Alpha} = 0.81$), with item-total correlations ranging from .73 to .36 (see Tables 3 & 4), and test-re-test reliability ranging from .69 to .41, across the eight items (see Table 5).

Table 2. Demographic Profile of Study Sample

	<i>N</i>	%
Caucasian (non-Hispanic)	110	68.75
African American (non-Hispanic)	11	6.88
Hispanic	23	14.37
Asian	11	6.88
Other	5	3.12
Total	160	100
Males	49	30.6
Females	111	69.4
Total	160	100
Some high school	1	0.63
High school graduate	8	5.00
Some college	16	10.00
College graduate	57	35.63
Graduate/professional school	78	48.75
Total	160	100.00

Table 3. Inter-correlations between individual items on the State Boredom Measure SBM Items

	<i>SBM1</i>	<i>SBM2</i>	<i>SBM3</i>	<i>SBM4</i>	<i>SBM5</i>	<i>SBM6</i>	<i>SBM7</i>	<i>SBM8</i>
SBM1	1.00							
SBM2	.740**	1.00						
SBM3	.390**	.459**	1.00					
SBM4	.470**	.465**	.467**	1.00				
SBM5	.552**	.641**	.379**	.645**	1.00			
SBM6	.400**	.484**	.209**	.267**	.407**	1.00		
SBM7	.163	.279**	.311**	.285**	.318**	-.009	1.00	
SBM8	.312**	.369**	.226*	.398**	.461**	.197*	.400**	1.00

**Correlation is significant at the 0.01 level (2-tailed).

*Correlation is significant at the 0.05 level (2-tailed)

SBM = State Boredom Measure

Key

- SBM1- How often can you remember feeling bored
- SBM2-How often can you remember feeling bored longer than 3 hrs
- SBM3-Longest period of boredom before doing something about it
- SBM4-How unpleasant was the experience of boredom
- SBM5-Impact of boredom on the overall quality of life
- SBM6-Level of boredom compared to 10 yrs ago
- SBM7-Physical or medical problems making it more difficult to avoid being bored
- SBM8-Situation or social problems making it more difficult to avoid being bored

Table 4. Item-Total Correlations for the SBM

<i>Corrected Item-Total Correlations for the SBM</i>	
<i>Item</i>	
SBM2	0.731**
SBM3	0.494**
SBM4	0.628**
SBM5	0.728**
SBM6	0.376**
SBM7	0.357**
SBM8	0.481**

**Correlation is significant at the 0.01 level (2-tailed).
 SBM = State Boredom Measure

Table 5. Test-Retest Reliability for the SBM by Item

<i>SBM</i>	<i>Time 1</i>		<i>Time 2</i>		<i>Time1-2</i>
<i>Items</i>	<i>Mean</i>	<i>SD</i>	<i>Mean</i>	<i>SD</i>	<i>Correlation</i>
SBM1	3.314	1.546	3.071	1.612	0.693**
SBM2	2.474	1.542	2.202	1.387	0.601**
SBM3	3.175	1.677	3.012	1.780	0.409**
SBM4	3.763	1.685	3.639	1.818	0.678**
SBM5	2.967	1.415	2.892	1.431	0.616**
SBM6	3.136	1.603	3.193	1.700	0.609**
SBM7	2.368	1.594	2.131	1.495	0.494**
SBM8	3.313	1.812	3.524	1.872	0.418**

Time1 –Time 2 = 14 days
 **Correlation is significant at the 0.01 level (2-tailed).
 SBM = State Boredom Measure

Validity

In terms of validity, as would be expected, all of the SBM items were found to have significant positive correlations with the most widely used measure of trait boredom, the Boredom Proneness Scale (BPS; Farmer and Sundberg, 1986.). In keeping with the reportedly modest correlation between the BPS and BSS (Vodanovich, 2003), somewhat less robust associations were found with the Boredom Susceptibility Scale (BSS; Zukerman & Link, 1971). Four of the eight items on the SMB (items SBM1, 2, 4 and 5) positively correlated with the BSS, whereas SBM 3 (the perceived ability to tolerate sustained boredom) was found to be negatively correlated with the BSS (see Table 6). Interestingly, this latter pattern of findings with the BSS is consistent with the type of impulsive, sensation seeking behavior that seems characterize individuals who score highly on the BSS (Vodanovich, 2003).

Table 6. Correlations between SBM Items, the Boredom Susceptibility Scale, the Boredom Proneness Scale and the Zung Self Report Depression Scale

<i>SBM</i>	<i>BSS</i>	<i>BPS</i>	<i>ZSRDS</i>
<i>Items</i>			
SBM1	0.314**	0.733**	0.587**
SBM2	0.249*	0.694**	0.381""
SBM3	-0.350**	0.256*	0.333**
SBM4	0.547**	0.700**	0.195**
SBM5	0.268*	0.683**	0.250**
SBM6	-0.106	0.344**	0.419*
SBM7	0.050	0.290**	0.229*
SBM8	0.072	0.319**	0.497*

**Correlation is significant at the 0.01 level (2-tailed).

*Correlation is significant at the 0.05 level (2-tailed)

SBM = State Boredom Measure

BSS = Boredom Susceptibility Scale

BPS = Boredom Proneness Scale

ZSRDS = Zung Self-Report Depression Scale

As further evidence of convergent and divergent validity, all eight of the items on the SBM were found to be positively correlated with scores on the Zung Self-Rating Depression Scale (ZSRDS; Zung, 1965) (see Table 7), whereas seven of the eight SBM items correlated in the opposite direction (negatively) with scores on the Satisfaction with Life Scale, a well-established measure of subjective well-being (Diener, et al. 1985) (see Table 7).

Table 7. Correlations between SBM Items and the Satisfaction with Life Scale

<i>SBM</i>	<i>SLS</i>
<i>Items</i>	
SBM1	-0.270**
SBM2	-0.240**
SBM3	-0.187*
SBM4	-0.066
SBM5	-0.288**
SBM6	-0.256**
SBM7	-0.255**

**Correlation is significant at the 0.01 level (2-tailed).

*Correlation is significant at the 0.05 level (2-tailed)

SBM = State Boredom Measure

SLS = Satisfaction with Life Scale

Finally, as an illustration of the methodological utility of the SBM, a separate sample of 84 undergraduates were administered the SBM, BSS, BPS and a brief questionnaire on the frequency of use of illicit and licit (cigarettes and alcohol) substances. Demographically, the sample consisted of 60 women and 24 men, ranging in age from 18 to 42 years (Mean age= 28.7, SD= 9.5) and was 78% Caucasian, 12% Asian, 5% African American, 3% Hispanic, and 2% other. Controlling for BSS and BPS status in a partial correlation analysis, SBM1 scores (frequency of boredom episodes) were found to be significantly correlated with the use of alcohol ($r=.323$, $p. <.015$), whereas frequency of alcohol use was found to be negatively correlated with SBM 4 (degree of unpleasantness; $r=.367$, $p. <.023$) and SBM8 (boredom attributed to social-environmental factors; $r=.499$, $p. <.002$). A plausible interpretation of this pattern of results is that regardless of the degree of susceptibility to boredom, individuals who used alcohol during the preceding two weeks recalled being bored more frequently than those who did not use alcohol, and those who drank more frequently tended to judge their boredom episodes as being less unpleasant and were less inclined to attribute their difficulties in avoiding boredom to social and environmental constraints.

CONCLUSIONS

Although a truly comprehensive definition of boredom or any other putative emotion should encompass a variety of perspectives and levels of explanation, perhaps the most useful definition for our purposes is one based on its presumed adaptive function (Plutchik, 1970). That is to say, like fear and anxiety, boredom can be construed as a feeling state that provides a signaling function with respect to an individual's relationship to a given environment -- which may be external or internal in nature. Accordingly, the feeling state of boredom has been described by some as a motivational cue to the individual that they have exhausted all of the novelty and positive reinforcement that can be extracted from a particular environment using their current strategy of exploration (Todman 2003). The bored individual is therefore increasingly motivated to privilege one of two behavioral choices over maintaining the status

quo. These choices are to select a more effective strategy for exploring the current environment or to keep the old strategy but select a new environment.

A large body of research on trait boredom and its various manifestations suggests that the threshold for the triggering of the boredom feeling state and the attendant cognitive and behavioral decision making varies greatly among individuals (Mikulas & Vodanovich, 1993, O'Hanlon, 1981, Vodanovich, 2003). It has also been shown that high boredom proneness tends to be associated with a variety of untoward outcomes and maladaptive behaviors (Blaszczynski, et al. 1990; Farmer & Sundberg, 1986; Leong & Schneller, 1993; Orcutt, 1984, Sommers & Vodanovich, 2000). However, environments and the perceptions of environments also vary within and across individuals, thus suggesting that the prevalence and character of an individual's experience with boredom cannot be predicted solely on the basis of trait boredom scores. The argument has been made that it is therefore largely an article of faith that the negative outcomes that have been found to be associated with high boredom proneness actually implicate the actual experience of boredom. Since it is possible that highly boredom prone individuals can lead life styles that result in minimal episodes of boredom and conversely low boredom prone individuals can find themselves in highly monotonous environments for protracted periods of time, it behooves us adopt research paradigms that will do a better job of untangling the state-trait components of boredom. It is our hope that the SBM is a tool that will prove to be helpful in this endeavor.

The SBM of course represents a very preliminary effort to devise a workable tool for use in boredom research. The validation samples are extremely small and no doubt many of the reported psychometric properties will have to be revised as larger studies are completed. It is also fair to say that despite the efforts made, the dimensions selected for the measure are somewhat arbitrary. However, the conceptual underpinnings and rationale for the instrument we believe are relatively sound and the measure certainly seems to be no worse than the methods currently used for assessing non-trait forms of the boredom experience. Indeed, we are not aware of any other instrument in use that attempts to capture how individuals recollect and evaluate their experiences with boredom during a circumscribed period in the recent past. The preliminary data provided above (especially with regard to the demonstration that SBM items can correlate with outcomes even when trait boredom is statistically controlled) would seem to suggest that even in its admittedly primitive form, the proposed approach, if not the instrument, may have some utility.

REFERENCES

- Berlyne, D. (1970). 'Novelty, complexity and hedonic value'. *Perception and Psychophysics* 8, 279-286.
- Blaszczynski, A., Mcconaghy, N. & Frankova, A. (1990). Boredom proneness in pathological gambling. *Psychological Reports* 67, 35-42.
- Csikszentmihalyi, M. (2000). *Beyond boredom and anxiety*. Jossey-Bass Inc.
- Csikszentmihalyi, M. & Larson, R. (1987). Validity and reliability of the Experience-Sampling Method. *J Nerv Ment Dis. Sep*;175(9):526-36
- Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The Satisfaction with Life Scale. *Journal of Personality Assessment*, 49, 71-75.
- Farmer, R. & Sundberg, N. D. (1986). Boredom Proneness- The development and correlates of a new scale. *Journal of Personality Assessment* 50: 4-17.
- Fiske, D .W. & Maddi, S. R. (1961). *Functions of Varied Experience*. Dorsey Press.
- Leong, F. T. & Schneller, G. R. (1993). 'Boredom proneness: Temperamental and cognitive components'. *Personality and Individual Differences* 14: 233-239.
- Mikulas, W. L. & Vodanovich, S. J. (1993). The essence of boredom. *The Psychological Record* 43, 3-12.
- O'Hanlon, J. F. (1981). Boredom: A review. *Human Factors* 23: 329-340.
- Orcutt, J. D. (1984). Contrasting effects of two kinds of boredom on alcohol use. *Journal of Drug Issues* 14, 161-173.
- Plutchik, R. (1970). Emotions, evolution and adaptive processes. In Arnold, M. (E.) *Feelings and Emotions: The Loyola Symposium*. New York: Academic Press.
- Sommers, J. & Vodanovich, S. J. (2000). Boredom proneness: Its relationship to psychological and physical health symptoms. *Journal of Clinical Psychology*, 56, 149-155.
- Spielberger, C. D., Reheiser, E. C., Ritterband, L. M., Sydeman, S. J. & Unger, K. K. (1995). Assessment of Emotional States and Personality Traits: Measuring Psychological Vital Signs. In Butcher, J.N. (Ed.) *Clinical Personality Assessment: Practical Approaches*. New York: Oxford University Press, 1995.
- Todman, M. (2003). Boredom and psychotic disorders: Cognitive and Motivational Issue. *Psychiatry: Interpersonal and Biological Processes* 66(2). 146-167.
- Vodanovich, S. J. (2003). Psychometric measures of boredom: A review of the literature. *Journal of Psychology*, 137, 569-593
- Zuckerman, M. & Link, K. (1971). Dimensions of Sensation Seeking. *Journal of Consulting and Clinical Psychology*, 36(1), 45-52.
- Zung, W. W. (1965). A self-rating depression scale. *Archives of General Psychiatry*, 12, 63-70.