Routinization and Emotional Well-Being: An Experience Sampling Investigation in an Elderly French Sample

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This investigation examined the predictive validity of routinization preference measures, as well as the association of routinization to state affect in daily life. The authors collected naturalistic repeated observations from elderly participants living in private residences or retirement homes. Preferences for routinization were significantly associated with the repetition of both behaviors and environmental contexts. Routines were associated with decreases in positive affect in within-person analyses but had no association to anxious or depressed mood states. The findings are discussed in terms of the complexity of the routinization concept and its relevance for understanding emotional well-being in elderly people.

It has been proposed that routines may protect older individuals from the stress or dangers associated with novel situations and, therefore, that routinization in this population may represent an adaptive process (de Beauvoir, 1970; Kastenbaum, 1980, 1984; Reich & Zautra, 1991). However, it is now well documented that certain forms of coping may have detrimental effects on emotional or psychological well-being even when they are actively and intentionally employed by the individual (for a review, see Suls & Fletcher, 1985). The possibility that routinization may have similarly undesirable effects in the elderly person is supported by findings that preferences for routines are not associated with improved emotional well-being (Reich & Zautra, 1991) and that such preferences may, in fact, increase anxiety and depression levels (Bouisson, in press).

The possibility that routinization may have negative consequences on the emotional experience of elderly persons has been examined only indirectly by past research. Assessments of emotions in previous studies have relied almost entirely on summary scores from trait affect inventories or symptom checklists, rather than more direct examinations of how discrete routines relate to immediate mood changes. Furthermore, the construct of routinization itself has typically been examined only from a cognitive perspective whereby elderly participants are asked about their preferences for sameness or routines. The degree to which such preferences predict actual routines in daily life is currently unknown.

The present investigation examined the capacity of routinization preferences to predict actual behavioral routines in daily life, as well as the relationship of routines to fluctuations in state affect. We assessed elderly French participants living independently or in retirement facilities four times a day over several days using the Experience Sampling Method (ESM). We hypothesized that routinization preferences would predict the repetition of both specific behaviors and environmental contexts during the same time periods across different days and that the presence of routinization would be associated with decreases in positive mood and increases in anxious and depressed moods.

**METHODS**

**Participants**

We recruited 47 elderly participants (12 men and 35 women) for the present study from four geographic areas of France. The mean age of the sample was 80.89 years ($SD = 8.12$). Twenty-five participants were living in private residences, and 22 were living in retirement homes.

**Procedure**

We recruited participants by convenience sampling through residential nursing facilities (retirement or nursing homes) or from independent residences. Individuals consenting to participate completed a routinization preference questionnaire, and we explained to them the procedures to be used in the ESM phase of the study. To avoid difficulties associated with standard ESM procedures that are not adapted to elderly samples, we achieved ambulatory data collection through both in-person and mobile cell phone monitoring. Using this approach, we assessed participants four times a day over 4 days concerning their mood and behavior at the moment of the assessment (for more information of the ESM methodology, see Swendsen, 1998; Swendsen et al., 2000).

**Materials and Apparatus**

**State affect**.—We examined three broadly defined mood states at each experience sampling assessment. We asked participants how happy, anxious, or depressed they felt at the moment of the assessment using 4-point Likert scales (higher scores indicating greater happiness, anxiety, or depression).

**Routinization preferences**.—We examined routinization preferences at one point in time using a 10-item French-language questionnaire that asked participants to rate on 5-point Likert scales their level of agreement with statements about doing tasks in a particular order or concerning the desirability...
of changes to daily life routines. The 10-item scale has good internal consistency (α = 0.73), has high test–retest reliability over a 2-week period (r = .84), and is appropriately brief for use with very old or infirm participants (see Bouisson, in press).

**Behavioral and environmental routinization.**—We examined specific behaviors and environmental contexts at each experience sampling assessment by asking participants to describe where they were at the moment of the assessment as well as their principle activity. We then coded responses by using a coding scheme similar to Swendsen and colleagues (Swendsen, 1998; Swendsen et al., 2000), which included 15 activity categories and 18 different environmental settings. The kappa coefficients for interrater reliability in the present study were .77 for activity categories and .82 for location categories. We then assessed activity or environmental routinization by counting the number of repeated activities and environmental contexts observed within the same time period across each of the 4 days.

**Overview of Analyses**

We analyzed data by using the hierarchical linear and nonlinear modeling (HLM) program developed by Bryk and Raudenbush (1992). By using nonlinear bernouli models, the fixed effect intercept (γ₀₀) indicates the expected log-odds of repetition rate for a given observation with values of zero on the predictors, and the fixed effect coefficient γ₀₄ represents the degree to which routines (the outcome) increase with greater preferences for routinization, after we controlled for covariates (age, sex, residential status). We examined a cross section of the within-person association of state affect to routines through hierarchical linear models where the fixed effect coefficient γ₁₀ indicates the average within-person coefficient (or slope) for routinization on a given mood state (controlling for other moods). The random coefficient estimates in each of these models (U₀ or U₁) indicates the degree to which observed effects vary significantly across individuals.

**RESULTS**

The final sample of 47 participants provided 602 valid observations sampled from diverse daily life contexts. Missing data were not associated with residential status, t(45) = −1.22, p < .05, but were moderately and negatively correlated with age, r = −.36, p < .05. Age was significantly correlated with preferences for routines, r = .41, p < .01, and older participants were more likely to be living in retirement homes, t(45) = −5.26, p < .001.

As demonstrated by Table 1, greater expressed preferences for routines was associated with an increased likelihood that the participant would be found in the same physical environment across each of the 4 days, γ₁₄ = 0.035, t(45) = 2.460, p < .05. The full model demonstrated that 77% of this environmental routinization variance was explained by the four between-person variables and that routinization preferences specifically accounted for 4.5% (Table 2). Similarly, routinization preferences were also associated with increased likelihood that the participant would repeat the same specific behavior or activity,
\(\gamma_{04} = 0.041, t(45) = 2.381, p < .05\). The full model explained 38\% of activity routinization variance, of which 18\% was specifically attributable to between-person differences in routinization preferences (Table 2).

We then examined the relationship of routinization to state affect by hierarchical linear models (Tables 3 and 4). Although we observed no effect for anxious or depression moods, positive mood decreased when we observed environmental repetition, \(\gamma_{10} = -0.126, t(45) = -2.784, p < .01\), and when activity repetition occurred, \(\gamma_{10} = -0.119, t(45) = -2.826, p < .01\). Time-lagged analyses also demonstrated that the presence of routines was associated with later decreases in positive mood, and not the reverse. Furthermore, the association of routinization to positive moods did not vary as a function of any of the between-person variables. The variance associated with within-person changes in positive mood was 7\% for environmental repetition and 4\% for activity repetition.

**DISCUSSION**

The findings in this study provide strong support for the predictive validity of routinization preference measures in that they are salient predictors of repetition in daily life activities and environmental contexts. Furthermore, increases in routinization in daily life are associated with decreases in positive affect, and time-lagged analyses support the probable influence of routinization on mood. The findings are consistent with past research (Bouisson, in press; Reich & Zautra, 1991) in indicating that routinization should not be conceptualized as a universally adaptive coping strategy in most elderly individuals. In this way, it remains possible that breaks in routines may be psychologically beneficial even to elderly persons who actively seek sameness and repetition. An unexpected result of the present study concerns the lack of association of routinization specifically with anxious and depressed moods, a finding in apparent contrast to its association with anxiety and depressive syndromes (Bouisson, in press). One explanation for this discrepancy is that state affect is not comparable to clinical syndromes that also encompass nonaffective symptoms such as sleep disturbance, appetite loss, fatigue, or cognitive problems. It is also important to note that seemingly associated mood states may in fact be orthogonal. That is, it is possible to be both happy and anxious at the same time or to describe oneself as feeling “unhappy” while not endorsing feeling “depressed.”

The reported findings constitute the first examination of this topic using the experience sampling method and conclusions should be drawn with caution. Concerning limitations of the study, the repeated daily life assessments are necessarily brief and therefore more detailed assessments of emotional well-being may provide different or complementary information. Furthermore, analyses are based on a sample of moderate size and do not address specific subtypes of routinization, including health-related preferences for routines, that may have differential associations to emotional states (see also Reich & Zautra, 1991). Future research should benefit from considering these issues in understanding the diverse benefits, consequences, and motivations for routinization in elderly individuals.

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