

# Exploring Engagement in Adulthood: Application of the Day Reconstruction Method

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## RATIONALE

While several studies suggest that sustained engagement would help to maintain or enhance cognitive functioning (e.g., Hultsch et al., 1999), other research has failed to demonstrate this relationship (e.g., Salthouse et al., 2002). Inconsistencies in findings may be attributed in part to how engagement has been measured, deriving from a lack of consensus about what the construct, "an engaged or active lifestyle" actually entails. As previous studies have generally measured the frequency or number of activities performed, a greater understanding of an active lifestyle The aims of the present study were to: explore engagement that through application of a novel methodological approach, the Day Reconstruction Method.

examine how activity, affect, and personality contribute

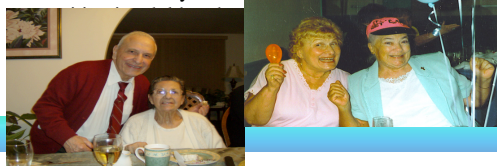


Table 2. Mean Affective Ratings for Activities

ACTIVITIES	Intellectual Challenge	Positive	Effort	Competent	Proportion of Sample Reporting
Eating	1.35	4.01	2.14	3.85	0.98
Watching TV	1.79	3.68	2.98	3.40	0.87
Reading	2.32	3.90	3.47	3.78	0.80
Self-care	0.79	3.30	3.04	3.91	0.79
Preparing Food	1.16	3.83	3.33	4.05	0.72
Socializing	2.07	4.66	3.80	3.84	0.72
Housework	1.06	3.36	3.51	4.06	0.56
Talking on Phone	1.78	4.15	3.71	3.88	0.51
Nap/Resting	0.91	3.38	1.88	2.94	0.49
Computer/Internet	3.11	3.82	4.25	4.12	0.48
Shopping	1.12	3.82	3.68	4.18	0.47
Commuting	1.02	3.66	3.52	4.14	0.46
Exercising	1.07	4.24	4.74	4.36	0.39
Writing/E-mail	2.62	3.84	4.09	4.30	0.35
Working	2.45	3.81	4.44	4.49	0.35
Games	3.83	4.17	4.23	4.18	0.34
Praying/Meditating	1.83	4.26	3.77	3.97	0.21
Hobbies	2.74	4.57	4.32	4.30	0.18
Volunteering	1.90	4.52	4.54	4.44	0.16
Clubs/Organizations	3.73	4.65	4.43	4.59	0.11
Gardening	1.00	3.99	3.94	4.30	0.11
Intimate Relations	0.67	5.00	3.42	3.00	0.03
Care of Children	2.70	4.99	4.55	4.50	0.03

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## METHOD

### The Day Reconstruction Method (DRM; Kahneman et al., 2004)

Community-dwelling adults at least 60 years of age ( $N = 192$ ,  $M = 72$  years) constructed diary entries consisting of a series of episodes evoking the context (i.e., activities and experiences) of the preceding day. Although participants were not required to turn in their diaries, a review of these notes was encouraged to help support accurate retrieval of specific episodes on a structured response form. Participants reported the approximate times at which the episode began and ended and what they were doing. For each episode, participants rated how they felt on a 7-point scale (0 = Not at all; 6 = Very Much) (see Table 1).

- Episodes were rated along several dimensions:
  - Positive Affect: happy, warm/friendly, enjoying myself, rewarding experience ( $\alpha = .91$ )
  - Effortful Allocation: attention was focused, put forth effort ( $\alpha = .80$ )
  - Competence: competent/capable, in control ( $\alpha = .87$ )
  - Intellectual Challenge was considered separately.

Table 1. Activity and Affect

ACTIVITY	M	SD
Number of Episodes	12.96	3.91
Time Spent in Activities (hours)	14.50	1.90
Number of Activities	22.24	8.25
<b>AFFECT</b>		
Intellectual Challenge	1.77	1.19
Positive Affect	3.84	1.19
Effortful Allocation	3.56	1.16
Competence	3.98	1.38

### Procedures

#### MAILED MATERIALS

##### Engagement

##### •DRM

##### Personality Measures

- Personality Attributes Reflecting Cognitive Engagement (PACE;  $\alpha = .82$ )
  - Mindfulness
  - Need for Cognition
  - Openness to Experience

- Neuroticism
- Extraversion

#### LABORATORY SESSION

##### Cognitive Measures

- Verbal Ability: Extended Range
- Processing Speed: Letter and Pattern Comparison ( $\alpha = .72$ )
- Working Memory: Letter-Number Sequencing
- Inductive Reasoning: Letter Sets, Figure Classification ( $\alpha = .41$ )

## RESULTS

Table 3. Interrelationships Among Activity, Affect, Personality, and Cognition

	ACTIVITY			AFFECT			PERSONALITY			
	AGE	Duration	Frequency	Intellectual	Positive	Effort	Competent	PACE	N	E
Age	-0.07	-0.04	-0.05	-0.15 *	-0.14 †	-0.21 **	-0.08	-0.02	-0.06	
Cognition										
Verbal Ability	-0.04	0.16 *	0.20 **	0.29 **	-0.04	0.14	0.04	0.25 **	-0.07	-0.18 *
Processing Speed	-0.42 **	0.25 *	0.16	0.17	0.01	-0.03	0.05	0.25 **	0.01	-0.01
Working Memory	-0.21 **	0.20 *	0.11	0.14	0.10	0.10	0.10	0.16 *	0.01	-0.10
Inductive Reasoning	-0.37 **	0.23 *	0.18	0.24 **	0.12	0.17	0.15	0.24 *	0.16	-0.09
Visual-Spatial	-0.32 **	0.36 **	0.15	0.17	0.03	0.07	0.14	0.21 *	0.14	-0.12
Fluency	-0.16 *	0.17 *	0.20 **	0.05	-0.11	-0.02	-0.03	0.27 **	-0.02	0.08
Fluid Ability Composite	-0.41 **	0.33 **	0.22 **	0.21 **	0.02	0.07	0.11	0.32 **	0.09	-0.06

Note. Personality Attributes Reflecting Cognitive Engagement (PACE); Neuroticism (N); Extraversion (E). \*\* $p < .01$ , \* $p < .05$ , † $p < .10$  after Bonferroni corrections were applied.

Table 4. Regression Analyses

		Fluid Ability Composite		$t$	
		$R^2$	$\Delta R^2$		
Model 1	Age	0.17	-0.41	-6.16 **	
Model 2	Personality	0.14			
	PACE		0.38	5.09 **	
	Extroversion		-0.19	-2.42 *	
	Activity	0.21	0.07	0.27	3.83 **
	Age	0.36	0.14	-0.39	-6.06 **
<b>Verbal Ability</b>					
Model 1	Age	0.00	-0.04	-0.55 ns	
Model 2	Personality	0.13			
	PACE		0.29	3.88 **	
	Extroversion		-0.30	-3.86 **	
	Affect	0.23	0.09		
	IC		0.27	3.33 **	
	Age	0.23	0.00	-0.05	-0.77 ns

Note. \*\* $p < .01$ , \* $p < .05$

## FINDINGS

The most frequently reported activities were essential daily activities (e.g., eating, self-care), watching television, and reading. Moderate to high levels of positive affect and competence were reported for majority of activities, thus suggesting that individuals select activities that are enjoyable and match their level of skill and ability (Table 2).

Overall, greater participation in activities was related to several cognitive measures. Additionally, an initial predisposition towards cognitive engagement, as well as continued participation in intellectual challenge were associated with performance on cognitive tasks (Table 3).

Regression analysis demonstrated that age remained a significant predictor of fluid ability performance after accounting for both personality and activity, indicating that age-associated differences could not be completely eliminated by these contextual variables (Table 4).

## CONCLUSION

This preliminary study shows that the DRM has potential to provide a more nuanced portrait of activity-personality-cognition relationships in adulthood than has been considered. However, as this research appears to suggest that greater participation in intellectual activities may contribute to cognitive performance, it also may be that initial cognitive ability or a predisposition towards cognitive endeavors enables an individual to enjoy and engage in these activities.

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