Published in final edited form as:

J Coll Stud Dev. 2017 September ; 58(6): 954–960. doi:10.1353/csd.2017.0075.

Time Use During First Year of College Predicts Participation in High-Impact Activities During Later Years

Meg L. Small, Ph.D. and

Human Development & Family Studies, The Pennsylvania State University, mxs693@psu.edu,
Phone: 814-865-5207, Fax: 814-865-2530, 316A Biobehavioral Health Building, University Park,
PA, 16802

Emily A. Waterman, M.S.

Human Development & Family Studies, The Pennsylvania State University

The value of a college education depends on the experiences and opportunities students engage in over the course of their college career (Kuh, Hu, & Vesper, 2000; Kuh, Kinzie, Buckley, Bridges, & Hayek, 2006) and the transition to college is a particularly important time as it sets the stage for students' academic and personal success in the years to come (Tinto, 2007). To increase student engagement, many universities are adopting high-impact educational practices that include study abroad opportunities, faculty mentoring, internships, service learning, challenging coursework, and research experiences; these institutions are also intentionally promoting high-impact co-curricular activities such as community service and leadership positions in campus organizations (Kuh, 2008). How students spend their time during their first year may have implications for engagement in high-impact activities during their third and fourth years. For instance, many first-year students engage in high rates of drinking, socializing, and passive entertainment such as watching movies (Padilla-Walker, Nelson, Carroll, & Jensen, 2010; Schulenberg & Maggs, 2002). Evidence suggests that these activities are associated with students' engagement in high-impact activities such as volunteering (Finlay, Ram, Maggs, & Caldwell, 2011) during that same year. However, few studies have examined first-year students' time use and their engagement in high-impact activities during their third and fourth years. As colleges and universities increase their investment in high-impact activities, understanding which first-year experiences predict higher levels of participation later could prove useful for early intervention. This longitudinal study explored how students' time use (e.g., volunteering, napping, going to bars and parties) during their first year of college predicted participation in a subset of high-impact activities (civic engagement, study abroad, leadership position) and course selection (easy or difficult) in their third and fourth years of college.

Method

Participants

Participants were part of a longitudinal study of undergraduate students at a large Northeastern university (Patrick, Maggs, & Lefkowitz, 2015). Eligibility requirements included being a first-year, full-time student under the age of 21, being a U.S. citizen or permanent resident, and residing within 25 miles of campus. The study used a longitudinal burst design. Students responded to a baseline survey and 14 consecutive daily surveys for

seven consecutive semesters starting in their first semester. Students completed all surveys online. Students were selected using stratified sampling to recruit a diverse sample with respect to gender and the four largest race/ethnicity categories. A total of 744 participants provided consent and completed the Semester 1 (S1) baseline survey, for a response rate of 65.6%.

In the current analyses, we used data regarding students' time use from the daily surveys at Semester 1 (S1) and Semester 2 (S2), and data regarding students' participation in high-impact activities from the semester survey at Semesters 5, 6, and 7 (S5, S6, and S7). Students completed S1 and S2 during their first year at the university, completed S5 and S6 during their third year, and completed S6 during the first semester of their fourth year. The retention rate (i.e., percentage completing a variable of interest on the S5, S6, or S7 surveys) was 88.8% ($N = 661$). Due to missing data (i.e., study attrition and items that participants skipped), the final analytic sample ($N = 652$) was 87.6% of the full sample and 53.5% female. Students could identify as more than one race or ethnicity; thus, the sample was 45.6% White/European American, 29.1% Asian American/Hawaiian/Pacific Islander, 26.2% Hispanic/Latino American, 21.0% Black/African American, and 2.6% Native American/American Indian. We used nine t-tests and six Chi-squares to determine whether participants in the analytic sample differed from participants not in the analytic sample on S1 variables. Participants in the analytic sample were more likely to be female ($\chi^2(1, n = 744) = 15.62, p < .001$), and tended to spend less time napping ($t(724) = -4.13, p < .001$) and playing video games ($t(724) = -2.00, p < .05$) in S1 than participants not in the analytic sample. Groups did not statistically differ on S1 age, race/ethnicity, time spent volunteering, watching TV, going to bars/parties, participating in campus events/clubs, and political activism, or drinking to get drunk.

Procedures

Eligible participants received recruitment letters with a \$5 pre-incentive and a pen in the fall of their first year at the university. They earned \$20–\$40 for completing the larger survey, \$3 per day for completing each daily survey, and a \$13–\$18 bonus for completing all 14 daily surveys. The study was approved by the university's Institutional Review Board and participant confidentiality was protected by a federal Certificate of Confidentiality.

Measures

Time Use—For 14 consecutive days in S1 and S2, participants responded to this prompt regarding their time use on the previous day: “From the time you woke up until you went to sleep, how much time did you spend doing the following activities?” The scale ranged from *did not do* (0) to *10+ hours* (9). Activities included Volunteering (including work for a club), Attending a campus event or club, Napping, Watching TV, Playing video/computer games, and Going to bars, parties, etc. (Finlay, Ram, Maggs, & Caldwell, 2012; Lee, 2004). Similarly, participants responded to the prompt, “How much time did you spend participating in specific activities related to the following...”, again using a scale that ranged from *I never do this* (0) to *10+ hours* (10). Activities included Political activism. We calculated a mean of time use in the 28 days of S1 and S2 for each time use variable.

Napping and Attending a campus event or club were log-transformed to correct for positive skewness.

Drinking to get drunk—For 14 consecutive days in S1 and S2, participants responded to the prompt regarding their drinking behavior on the previous day, “Did you want to get drunk?” Answers were either *yes* (1) or *no* (0). We coded participants who responded ‘0’ to a previous prompt, “How many drinks of alcohol did you drink?” (Dimeff, Baer, Kivlahan, & Marlatt, 1999) as ‘0’ for “Did you want to get drunk?” We calculated the percentage of days for which students drank with the intention of getting drunk to the total days that the participant answered the survey.

Control variables—At S1, participants answered, separately for their mother and father, “What is the highest level of education your mother/father (or female/male guardian) completed?” Response choices ranged from *completed grade school or less* (0) to *graduate or professional school after college* (5). If participants reported both parents’ education, responses were averaged. Otherwise, the single response was used in analyses. Also at S1, participants reported their date of birth and the date of the survey. The difference between these two variables represents participants’ age.

Civic engagement—At S5, participants responded to 15 items regarding their civic participation in the past 12 months from a scale of *never* (1) to *weekly* (6; Dreary, Batty, & Gale, 2008). Example items included ‘Attend a public meeting or rally’, and ‘Volunteer for a political party’. We recoded responses to scales representing weekly participation. Participants’ scores were summed. Participants who did not respond to all 15 items were excluded from analyses using this variable ($n = 32$). Reliability was high ($\alpha = .86$). This variable was log-transformed to correct for positive skewness.

Course decisions—At S5, participants responded to the prompt, “How important are [these factors] in influencing you to choose a particular course or section?” on a scale of *not at all* (1) to *a lot* (5). Response options of interest were “Course reputation: It’s intellectually challenging” and “Course reputation: It’s easy” (adapted from Babad, 2001). Participants who were studying abroad, in an internship, or no longer a student at S5 were excluded from analyses using this variable ($n = 61$).

Study abroad—At S5, S6, and S7, participants responded to the prompt, “Are you currently a University student on campus?” from a list of options including *Yes, but I am currently studying abroad this semester*. We coded participants who chose this option as having studied abroad.

Leadership position in a philanthropy organization—In S6, participants responded to the prompt, “What was your involvement in {name of large philanthropy} this year?” We coded participants who indicated holding a leadership position as ‘1’ and other participants who did not hold a leadership position as ‘0.’

Results

First-year students spent more time in passive activities such as napping and watching TV than they did in engaged activities such as volunteering, attending campus clubs and events, and political activism (Table 1). We conducted linear regression analyses for outcome variables time spent in civic engagement and course decisions (Table 2). We conducted logistic regression analysis for study abroad and held a leadership position in a philanthropy organization (Table 3). All regression analyses controlled for age and parent education. Overall, how students spent their time during their first year in college predicted their participation in selected high-impact activities during their third and fourth years. Specifically, time spent in civic engagement activities was predicted by time spent participating in campus events and clubs and participating in political activism during the first year. Choosing courses because they were difficult was predicted by less time spent watching TV. Studying abroad was predicted by more time spent volunteering and more time spent going to bars and parties. Holding a leadership position in a philanthropy was predicted by more time spent napping, watching TV, playing video games, and going to bars and parties.

Discussion

The decisions students make about time use early in their college career are associated with the activities in which they engage during their third and fourth years. For some high-impact activities, more time spent on active pursuits and less time spent on passive pursuits are early indicators of future participation later in college. Presumably, these later activities lead to better developmental outcomes as students are more likely to advance their career capital through new skills, insights, and relationships (Côté, 2002, 2006, Jay, 2012).

However, our results uncover the complexity between early social experiences and later high-impact activities. Interestingly, students who took on leadership roles in the large philanthropic organization were more engaged socially their first year, as indicated by time spent at bars and parties, but were not motivated to get drunk. This could be explained by the nature of leadership in the philanthropy organization, which requires high levels of interpersonal skills and social interactions. It could be that students with high levels of social skills or an extroverted personality select activities and experiences they believe to be social regardless of context (e.g., bars vs. leadership work). Similarly, studying abroad, which is generally considered to be a high-impact activity with the potential to help students develop cultural competence, perspective-taking, problem-solving, or language skills, may also attract highly social students (Pedersen, LaBrie, & Hummer, 2009). In the current study, study-abroad opportunities seemed to attract students with social motivations (going to bars and parties), but not students with early altruistic interests (e.g., volunteering). Civic engagement followed a more consistent trajectory whereby students with an early penchant continued to engage in these activities in later years.

This study was longitudinal so the phenomenon of interest was temporal and predictive. However, pre-existing characteristics may have driven both first-year time use and later engagement in high-impact activities. For instance, students with a high proclivity for taking

risks or seeking novelty may be motivated to drink and more likely to study abroad. Thus, other important student characteristics such as personality and agency that were not included may provide a more nuanced view of the findings. While the study utilized stratified random sampling procedures that produced a sample representative of the larger student body, it was conducted at single institution which limits the generalizability of the findings to students attending other types of universities.

Implications

Preparing students for personal and professional success is a top priority for colleges and universities. This study has important implications for student affairs administrators and program staff. For instance, how can programming be designed to augment early social opportunities and thus serve as a catalyst for later leadership positions? Also, examining students' motivations to study abroad would help elucidate the potential value of these opportunities. Perhaps more structure and dedicated mentoring connected to these programs would help social students who selectively engage derive greater benefit. High-impact activities such as study abroad, and leadership positions as well as challenging coursework, are critical activities designed to help students build important professional and personal skills (Kuh, 2008). To ensure that students are prepared for and participating in these activities, universities should consider students' time use during the transition to college. Helping students to make good choices about their time and establish engaged mindsets early in their college careers could increase participation in high-impact activities later.

Acknowledgments

This research was supported by grant RO1 AA016016 from the National Institute on Alcohol Abuse and Alcoholism to Dr. Jennifer Maggs, and by grant T32 DA017629 from the National Institute on Drug Abuse. The content is solely the responsibility of the authors and does not necessarily represent the official views of the funding agencies.

References

- Babad E. Students' course selection: Differential considerations for first and last course. *Research in Higher Education*. 2001; 42:469–492.
- Côté JE. The role of identity capital in the transition to adulthood: The individualization thesis examined. *Journal of Youth Studies*. 2002; 5:117–134.
- Côté, JE. Emerging adulthood as an institutionalized moratorium: Risks and benefits to identity formation. In: Arnett, JJ., Tanner, JL., editors. *Emerging adults in America: Coming of age in the 21st century*. Washington, DC: American Psychological Association; 2006. p. 85-116.
- Dimeff, LA., Baer, JS., Kivlahan, DR., Marlatt, GA. *Brief alcohol screening and intervention for college students (BASICS): A harm reduction approach*. New York: Guilford Press; 1999.
- Dreary I, Batty G, Gale C. Childhood intelligence predicts voter turnout, voting preferences, and political involvement in adulthood: The 1970 British Cohort Study. *Intelligence*. 2008; 36:548–555.
- Finlay AK, Ram N, Maggs JL, Caldwell LL. Leisure activities, the social weekend, and alcohol use: Evidence from a daily study of first-year college students. *Journal of Studies of Alcohol and Drugs*. 2012; 73:250–259.
- Jay, M. *The defining decade: Why your twenties matter-and how to make the most of them now*. New York: Grand Central Publishing; 2012.
- Kuh, GD. *High-Impact educational practices: What they are, who has access to them, and why they matter*. Washington, DC: Association of American Colleges and Universities; 2008.

- Kuh GD, Hu S, Vesper N. "They shall be known by what they do": An activities-based typology of college students. *Journal of College Student Development*. 2000; 41:228–244.
- Kuh, GD., Kinzie, J., Buckley, JA., Bridge, BK., Hayek, JC. Commissioned Report for the National Symposium on Postsecondary Student Success: Spearheading a dialog on student success. Washington, DC: National Postsecondary Educational Cooperative; 2006. What matters to student success: A review of the literature.
- Lee, CM. College Transitions Project: 14-day web-based diary measures. Unpublished manuscript. University of Washington; 2004.
- Padilla-Walker LM, Nelson LJ, Carroll JS, Jensen AC. More than a just a game: Video game and internet use during emerging adulthood. *Journal of Youth and Adolescence*. 2010; 39:103–113. [PubMed: 20084557]
- Patrick ME, Maggs JL, Lefkowitz ES. Daily associations between drinking and sex among college students: A longitudinal measurement burst design. *Journal of Research on Adolescence*. 2015; 25:377–386. [PubMed: 26052189]
- Pedersen ER, LaBrie JW, Hummer JF. Perceived behavioral alcohol norms predict drinking for college students while studying abroad. *Journal of Studies on Alcohol and Drugs*. 2009; 70:924–928. [PubMed: 19895769]
- Schulenberg JE, Maggs JL. A developmental perspective on alcohol use and heavy drinking during adolescence and the transition to young adulthood. *Journal of Studies on Alcohol*. 2002; 14:54–70.
- Tinto V. Research and practice of student retention: What's next? *Journal of College Student Retention: Research, Theory & Practice*. 2007; 8:1–19.

Table 1

Descriptive statistics ($N = 652$)

Variable	Mean	SD ^a	Min ^a	Max ^a	Percent ^b
Control Variables					
Age	18.44	.43	16.92	20.75	
Parent education	3.51	1.19	.00	5.00	
Time Use in First Year					
Volunteering	.15	.28	.00	2.00	
Participating in campus events or clubs ^c	.23	.36	.00	3.00	
Political activism	.25	.38	.00	2.38	
Napping ^c	1.10	.80	.00	6.29	
Playing video games	.62	.84	.00	5.18	
Watching TV	1.87	1.09	.00	5.19	
Being at bars at parties	.53	.58	.00	5.00	
Days spent drinking to get drunk	.06	.10	.00	.67	
High Impact Activities in Third and Fourth Years					
Civic engagement ^c	37.49	58.81	.00	656.00	
Choosing course because it's challenging	2.75	1.05	1.00	5.00	
Choosing course because it's easy	2.91	1.14	1.00	5.00	
Studied abroad					7.52 ^b
Held a leadership position in philanthropy					26.69 ^b

Note. The corresponding statistics represent the values *before* log transformations.^aSD = standard deviation, Min=minimum value, Max = maximum value^bPercentages for dichotomous variables represent the percentage of students who responded at that semester and did engage in that activity. The corresponding statistics represent the values *before* log transformation.

Table 2

Summary of linear regression analyses for high-impact activities

	Time spent in civic engagement (S5)	Course decisions: Challenging (S5)	Course decisions: Easy (S5)
	β	β	β
Age	-.04	-.01	.07
Parent education	.01	.01	.02
Volunteering	.03	-.01	-.02
Participating in campus events and clubs	.12 **	.01	-.01
Participating in political activism	.11 *	-.02	-.06
Napping	-.01	-.04	.08
Watching TV	-.06	-.10 *	.02
Playing video games	-.03	-.03	.04
Going to bars/parties	.03	-.03	.10
Drinking to get drunk	-.05	-.06	.03
R^2	.05 **	.02	.04 *

Note. S = Semester. β = standardized coefficients.*
 $p < .05$ **
 $p < .01$.

Table 3

Summary of logistic regression analyses for high-impact activities

	Studied abroad (S5, S6, or S7)	Held a leadership position in philanthropy (S6)
	Odds ratio	Odds ratio
Age	1.37	.84
Parent education	.97	1.17
Volunteering	.10 *	2.23
Participating in campus events and clubs	3.58	.64
Participating in political activism	.75	1.07
Napping	1.13	.72 *
Watching TV	.94	1.33 **
Playing video games	.87	.53 ***
Going to bars/parties	2.11 *	1.77 *
Drinking to get drunk	4.49	.35

Note. S = Semester.*
 $p < .05$ **
 $p < .01$ ***
 $p < .001$