**Having Too Little or Too Much Time is Linked to Lower Subjective Well-Being**

**Supplementary Materials**

The Supplementary Materials include regression tables and figures for Studies 1 and 2, additional analyses for Study 2, and additional details about the two Crowdsourcing Studies as part of the methods for Study 2.

Table S1

*Regression Results of Study 1: The Influence of Discretionary Time on Subjective Well-Being (Excluding Respondents with Discretionary Time More than 4 SD from the Mean)*

|  |  |  |
| --- | --- | --- |
| Variables | (1) | (2) |
| Hours of Discretionary Time | 0.083\*\*\*(0.010) | 0.097\*\*\*(0.011) |
| Hours of Discretionary Time Squared | -0.010\*\*\*(0.002) | -0.010\*\*\*(0.002) |
| Male |  | -0.026+(0.013) |
| White |  | 0.011(0.016) |
| Age |  | 0.002\*(0.001) |
| MarriedChildren4-Year CollegeNatural Log Transformed IncomeSelf-EmployedConstant | 3.185\*\*(.012) | 0.293\*\*\*(0.014)-0.027+(0.015)0.033\*(0.014)0.048\*\*\*(0.007)0.078\*\*\*(0.018)3.125\*\*\* (.013) |
| *R*2 | .006 | .060 |

*Notes.* (1) The coefficients reported above are the unstandardized coefficients. (2) All predictor variables, except Hours of Discretionary Time and Hours of Discretionary Time Squared, are mean-centered.

+ *p* < 0.10, \* *p* < 0.05, \*\* *p* < 0.01, \*\*\* *p* < 0.001

Table S2

*Regression Results of Study 1: The Influence of Discretionary Time on Subjective Well-Being (Excluding Respondents considered outliers via Cook’s Distance)*

|  |  |  |
| --- | --- | --- |
| Variables | (1) | (2) |
| Hours of Discretionary Time | 0.057\*\*\*(0.006) | 0.064\*\*\*(0.007) |
| Hours of Discretionary Time Squared | -0.004\*\*\*(0.001) | -0.004\*\*(0.001) |
| Male |  | -0.041\*(0.012) |
| White |  | -0.009(0.015) |
| Age |  | 0.002\*(0.001) |
| MarriedChildren4-Year CollegeNatural Log Transformed IncomeSelf-EmployedConstant | 3.197\*\*(.010) | 0.269\*\*\*(0.013)-0.013\*(0.015)0.029\*(0.013)0.055\*\*\*(0.007)0.133\*\*\*(0.016)3.203\*\*\* (.011) |
| *R*2 | .007 | .072 |

*Notes.* (1) The coefficients reported above are the unstandardized coefficients. (2) All predictor variables, except Hours of Discretionary Time and Hours of Discretionary Time Squared, are mean-centered.

+ *p* < 0.10, \* *p* < 0.05, \*\* *p* < 0.01, \*\*\* *p* < 0.001

*Figure S1*. Histogram of frequency of discretionary time in Study 1. Discretionary time is split into bins of 30 minutes.

Table S3

*Regression Results of Study 2: The Influence of the Crowdsourced Measure of Discretionary Time on Subjective Well-Being (with Respondents with Discretionary Time More than 4 SD from the Mean Removed)*

|  |  |  |
| --- | --- | --- |
| Variables | (1) | (2) |
| Hours of Discretionary Time | 0.024\*(0.004) | .033\*\*(0.012) |
| Hours of Discretionary Time Squared | -0.004\*\*\*(0.001) | -0.003\*\*\*(0.001) |
| Male |  | -0.189\*\*\*(0.029) |
| White |  | -0.052(0.035) |
| Age |  | 0.006\*\*\*(0.001) |
| MarriedChildren4-Year CollegeNatural Log Transformed EarningsEmployedConstant  | 7.139\*\*\*(0.035) | 0.579\*\*\*(0.031)0.075\*(0.036)0.117\*\*\*(0.032)0.030\*\*\*(0.008)-0.278\*\*(0.087)7.075\*\*\*(0.038) |
|  |  |  |
| *R*2 | .003 | .031 |

*Notes.* (1) The coefficients reported above are the unstandardized coefficients. (2) All predictor variables, except Hours of Discretionary Time and Hours of Discretionary Time Squared, are mean-centered.

+ *p* < 0.10, \* *p* < 0.05, \*\* *p* < 0.01, \*\*\* *p* < 0.001

Table S4

*Regression Results of Study 2: The Influence of the Crowdsourced Measure of Discretionary Time on Subjective Well-Being (with Respondents considered outliers via Cook’s Distance Removed)*

|  |  |  |
| --- | --- | --- |
| Variables | (1) | (2) |
| Hours of Discretionary Time | 0.021+(0.012) | 0.014(0.011) |
| Hours of Discretionary Time Squared | -0.003\*\*\*(0.001) | -0.002\*\*(0.001) |
| Male |  | -0.147\*\*\*(0.026) |
| White |  | -0.138\*\*\*(0.032) |
| Age |  | 0.008\*\*\*(0.001) |
| MarriedChildren4-Year CollegeNatural Log Transformed EarningsEmployedConstant  | 7.243\*\*\*(0.033) | 0.529\*\*\*(0.028)0.076\*(0.032)0.091\*\*(0.028)0.022\*\*(0.008)-0.313\*\*\*(0.088)7.290\*\*\*(0.034) |
|  |  |  |
| *R*2 | .001 | .036 |

*Notes.* (1) The coefficients reported above are the unstandardized coefficients. (2) All predictor variables, except Hours of Discretionary Time and Hours of Discretionary Time Squared, are mean-centered.

+ *p* < 0.10, \* *p* < 0.05, \*\* *p* < 0.01, \*\*\* *p* < 0.001

Table S5

*Regression Results of Study 2: The Influence of the Crowdsourced Measure of Discretionary Time on Subjective Well-Being (with activities indicated by 75% of participants as discretionary time)*

|  |  |  |
| --- | --- | --- |
| Variables | (1) | (2) |
| Hours of Discretionary Time | 0.044\*\*\*(0.012) | 0.048\*\*\*(0.012) |
| Hours of Discretionary Time Squared | -0.004\*\*\*(0.001) | -0.004\*\*\*(0.001) |
| Male |  | -0.196\*\*\*(0.029) |
| White |  | -0.050(0.035) |
| Age |  | 0.006\*\*\*(0.001) |
| MarriedChildren4-Year CollegeNatural Log Transformed EarningsEmployedConstant  | 7.069\*\*\*(0.038) | 0.581\*\*\*(0.031)0.082\*(0.036)0.119\*\*\*(0.031)0.031\*\*\*(0.008)-0.269\*\*(0.087)7.008\*\*\*(0.041) |
|  |  |  |
| *R*2 | .003 | .031 |

*Notes.* (1) The coefficients reported above are the unstandardized coefficients. (2) All predictor variables, except Hours of Discretionary Time and Hours of Discretionary Time Squared, are mean-centered.

+ *p* < 0.10, \* *p* < 0.05, \*\* *p* < 0.01, \*\*\* *p* < 0.001

Table S6

*Regression Results of Study 2: The Influence of the American Time Use Survey’s “Socializing, Relaxing, and Leisure” Measure of Discretionary Time on Life Satisfaction*

|  |  |  |
| --- | --- | --- |
| Variables | (1) | (2) |
| Hours of Discretionary Time | 0.016(0.011) | 0.020(0.012) |
| Hours of Discretionary Time Squared | -0.004\*\*\*(0.001) | -0.003\*\*\*(0.001) |
| Male |  | -0.182\*\*\*(0.029) |
| White |  | -0.056(0.035) |
| Age |  | 0.007\*\*\*(0.001) |
| MarriedChildren4-Year CollegeNatural Log Transformed EarningsEmployedConstant  | 7.165\*\*\*(0.017) | 0.572\*\*\*(0.031)0.065\*(0.036)0.110\*\*\*(0.032)0.029\*\*\*(0.008)-0.290\*\*(0.087)7.141\*\*\*(0.035) |
|  |  |  |
| *R*2 | .005 | .033 |

*Notes.* (1) The coefficients reported above are the unstandardized coefficients. (2) All predictor variables, except Hours of Discretionary Time and Hours of Discretionary Time Squared, are mean-centered.

+ *p* < 0.10, \* *p* < 0.05, \*\* *p* < 0.01, \*\*\* *p* < 0.001

*Figure S2*. Histogram of frequency of discretionary time in Study 2. Discretionary time is split into bins of 30 minutes.

**Additional Details about Study 2 Crowdsourcing Study to Identify Discretionary Activities**

 The American Time Use Survey has been administered annually from 2003 to 2016. The Subjective Well-Being measure (our primary dependent variable) was introduced in 2012 as part of the Well-Being Module, and it was included again in the 2013 administration of the survey. In order to assess the relationship between discretionary time and subjective well-being (and control for crucial covariates), we therefore analyzed the data for respondents who completed the survey in 2012 or 2013.

 As part of the American Time Use Survey, participants report a detailed account of their activities starting at 4 a.m. the previous day and ending at 4 a.m. on the day of the interview. For each activity that the participant reported, the interviewer asked him or her how long the activity lasted. The interviewer also asked who was in the room or accompanied the participant during the activity, as well as where the activity took place. The activities were coded into three tiers of categories ranging from “Broad” to “Intermediate” to “Specific,” which can be found at https://www.bls.gov/tus/lexicons.htm. For example, cleaning one’s house would be categorized as “Household Activities” (Broad categorization), “House Work” (Intermediate categorization), and “Interior Cleaning” (Specific categorization).

In our crowdsourced study that aimed to categorize all activities as discretionary or non-discretionary, we first compiled a list of Intermediate categories (e.g., House Work), providing examples from the Specific categories that comprised the Intermediate categories[[1]](#footnote-1). This resulted in 139 categories of activities. To avoid survey fatigue, each participant rated 30 of the 139 categories (see Table S7 for a complete list of activities and the percent of people who identified each activity as discretionary). Specifically, we asked participants to indicate whether they considered each presented category to be a use of discretionary time or not using the definition, “Discretionary Time is time spent on leisure activities or on other non-routine pursuits—where the primary function is the use of time for pleasure or some other intrinsically worthwhile purpose.”

We calculated the number of hours people spent on activities that fell in these categories; this was our measure of discretionary time. Income in the American Time Use Survey was defined as participants’ weekly wages. In order to be able to include participants who were not part of the labor force in our analyses, we entered the income of these participants as $0.

Table S7

*Percent of Participants from Crowdsourcing Study Who Identified Each Activity as Discretionary Time*

|  |  |
| --- | --- |
| **Activity** | **% of Participants Identifying Activity as Discretionary Time** |
| Relaxing and Leisure (e.g., doing nothing, watching TV, listening to the radio, playing games) | 96.97 |
| Travel Related to Socializing, Relaxing, and Leisure | 95.93 |
| Personal activities (e.g., having sex, making out) | 95.19 |
| Attending Sporting/Recreational Events (e.g., watching sporting events) | 94.29 |
| Socializing & Communicating with Others (e.g., hanging out with family, hanging out with friends) | 93.46 |
| Arts and Entertainment (other than Sports) (e.g., attending comedy club, attending an art gallery, attending a movie) | 93.16 |
| Playing Sports with Non-household Children (e.g., riding bikes with child, strolling with child) | 90.99 |
| Participating in Sports, Exercise, or Recreation (e.g., biking, playing basketball, fishing, running, golfing, doing yoga, working out) | 90.35 |
| Playing Sports with Household Children (e.g., riding bikes with child, strolling with child) | 89.80 |
| Travel Related to Eating & Drinking | 87.96 |
| Telephone Calls to/from Friends, Neighbors, or Acquaintances | 86.96 |
| Playing with Non-household Children (e.g., tickling child, playing games with child) | 86.79 |
| Taking Class for Personal Interest (e.g., taking an art, craft, hobby, recreational course) | 86.79 |
| Waiting Associated with Socializing, Relaxing, and Leisure | 86.49 |
| Travel Related to Sports, Exercise, & Recreation | 86.21 |
| Arts and crafts with Non-household Children (e.g., making holiday decorations with child, helping child make arts and crafts) | 84.85 |
| Attending or Hosting Social Events (e.g., attending or hosting parties/receptions or meetings for personal interest) | 83.19 |
| Arts and crafts with Household Children (e.g., making holiday decorations with child, helping child make arts and crafts) | 82.41 |
| Walking/Exercising/Playing with Animals (e.g., taking pets for a walk) | 81.08 |
| Playing with Household Children (e.g., tickling child, playing games with child) | 79.65 |
| Participating in Performance & Cultural Activities for Volunteering (e.g., acting in a performance, manning an information booth) | 78.57 |
| Telephone Calls to/from Family Members | 74.29 |
| Travel Related to Religious/Spiritual Activities | 73.79 |
| Extracurricular School Activities (Except Sports) (e.g., attending club activities, attending band practice) | 71.29 |
| Socializing, Relaxing, and Leisure as Part of Job (e.g., attending social event w/coworkers, talking w/coworkers at social event) | 69.30 |
| Reading to/with Household Children | 67.33 |
| Religious/Spiritual Practices (e.g., attending church/synagogue/temple/mosque services) | 67.26 |
| Travel Related to Volunteer Activities | 66.96 |
| Attending Non-household Children's Events (e.g., watching child's sporting event or school play) | 66.67 |
| Personal Care Services (e.g., getting a haircut, having nails done) | 66.34 |
| Waiting Associated with Sports, Exercise, & Recreation (e.g., waiting related to playing sports or exercising) | 62.89 |
| Attending Household Children's Events (e.g., watching child's sporting event or school play) | 61.68 |
| Shopping, Except Groceries, Food, and Gas (e.g., shopping at mall, ordering products) | 60.78 |
| Reading to/with Non-household Children | 59.63 |
| Talking with/listening to Non-household Children (e.g., talking with child, lecturing child) | 55.56 |
| Waiting Associated with Extracurricular Activities (e.g., waiting for band practice to start) | 55.26 |
| Purchasing Food (not groceries) (e.g., pay for food at restaurant) | 55.20 |
| Waiting Associated with Volunteer Activities | 54.39 |
| Waiting Associated with Eating & Drinking (e.g., waiting for food to be delivered) | 52.83 |
| Travel Related to Personal Care | 51.49 |
| Organization & Planning for Non-Household Children (e.g., planning parties for child, making costume for child) | 50.00 |
| Lawn, Garden, and Houseplant Care (e.g., applying pesticides, doing yard work, adding chemicals to the pool) | 49.56 |
| Social Service & Care Activities (Except Medical) for Volunteering (e.g., working in a soup kitchen, collection clothes for disaster relief) | 49.06 |
| Eating & Drinking | 48.94 |
| Public Health & Safety Volunteer Activities (e.g., donating blood) | 48.67 |
| Using Pet Services (e.g., attending animal obedience classes, hiring a pet sitter) | 47.71 |
| Talking with/listening to Household Children (e.g., talking with child, lecturing child) | 46.67 |
| Research Purchases (e.g., researching items/price/availability) | 44.57 |
| Indoor & Outdoor Maintenance, Building, & Clean-up Activities for Volunteering (e.g., building houses, wildfire sites, cleaning parks/streets) | 44.25 |
| Helping Non-household Adults (e.g., helping adult with computer, planning activities for adult) | 43.27 |
| Income-generating Hobbies, Crafts, and Food (e.g., preparing food or drink for sale, painting for sale) | 42.34 |
| Sleeping | 40.83 |
| Administrative & Support Activities for Volunteering (e.g., writing/sending emails, preparing for a meeting) | 39.82 |
| Research/homework for Class for Personal Interest | 39.81 |
| Household Services (not done by self) (e.g., using interior cleaning services, using meal preparation services) | 39.62 |
| Waiting Associated with Personal Care Services (e.g., waiting for the barber) | 39.13 |
| Interior Maintenance, Repair, & Decoration (e.g., decorating, changing light bulbs, making furniture, chopping wood) | 37.74 |
| Organization & Planning for Household Children (e.g., planning parties for child, making costume for child) | 37.00 |
| Care for Animals and Pets (e.g., cleaning up after pets, feeding pets) | 36.54 |
| Travel Related to Consumer Purchases (e.g., grocery shopping) | 36.19 |
| Income-generating Performances (e.g., playing in a band for pay, acting in a play for pay) | 35.51 |
| Travel Related to Telephone Calls | 35.19 |
| Travel Related to Caring For & Helping Non-household Members | 34.58 |
| Waiting Associated with Shopping (e.g., waiting in line to purchase groceries) | 34.26 |
| Grooming (e.g., washing, dressing oneself) | 33.33 |
| Food & Drink Preparation (e.g., cooking, baking, boiling) | 31.58 |
| Picking up/Dropping off Non-household Children | 30.91 |
| Sports and Exercise as Part of Job (e.g., playing golf w/clients, working out w/clients) | 30.77 |
| Exterior Maintenance, Repair, & Decoration (e.g., sweeping deck, shoveling snow, painting porch) | 30.36 |
| Appliance, Tools, and Toy Set-up, Repair, & Maintenance by Self (e.g., fixing household camera, setting up or fixing computer) | 30.00 |
| Food Presentation (e.g., serving a meal, setting the table) | 29.46 |
| Attending Meetings, Conferences, & Training for Volunteering | 29.46 |
| Looking After Non-household Children (e.g., supervising child, watching but not interacting with child) | 28.30 |
| Waiting for/with Non-household Children (e.g., waiting to pick up child) | 27.84 |
| Real Estate (e.g., looking at property, purchasing home, waiting for a real estate agent) | 26.61 |
| Grocery Shopping | 25.69 |
| Eating and Drinking as Part of Job (e.g., eating/drink w/clients or coworkers) | 25.49 |
| Telephone calls to/from salespeople | 24.39 |
| Travel Related to Household Activities (e.g., housework, food & drink prep.) | 24.30 |
| Using Lawn & Garden Services (e.g., hiring a landscaper, hiring someone to water plants) | 24.11 |
| Waiting Associated with Telephone Calls (e.g., waiting for a phone call) | 24.11 |
| Waiting Associated with Taking Classes (e.g., waiting for the teacher) | 24.00 |
| Housework (e.g., interior cleaning, laundry) | 23.81 |
| Travel Related to Education (e.g., travel related to taking a class) | 23.76 |
| Security Procedures Related to Volunteer Activities (e.g., opening bags for security search) | 23.21 |
| Waiting for/with Household Children (e.g., waiting to pick up child) | 22.94 |
| Looking After Household Children (e.g., supervising child, watching but not interacting with child) | 22.73 |
| Helping Household Adults (e.g., helping adult with computer, planning activities for adult) | 22.22 |
| Using Paid Childcare Services (e.g., hiring a nanny, waiting to meet a childcare provider) | 21.93 |
| Activities Related to Non-household Children's Education (e.g., helping child with homework, attending school conferences) | 20.91 |
| Travel Related to Using Household Services (e.g., using home maintenance services) | 20.75 |
| Travel Related to Using Professional and Personal Care Services (e.g., banking, medical care services) | 19.47 |
| Taking Class for Degree, Certification, or Licensure | 19.17 |
| Using Home Maintenance/Repair/Decor/Construction Services (e.g., hiring plumber, interior decorator) | 19.00 |
| Registration/Administrative Activities (e.g., enrolling in a class, waiting in line to register) | 18.69 |
| Waiting Associated with Income-generating Activities | 18.69 |
| Using Vehicle Maintenance or Repair Services (e.g., paying for a tune-up/oil change) | 18.58 |
| Security Procedures Related to Sports, Exercise, & Recreation (e.g., opening bags for security search) | 18.56 |
| Activities Related to Household Children's Education (e.g., helping child with homework, attending school conferences) | 17.71 |
| Security Procedures Related to Taking Classes (e.g., opening bags for security search) | 17.65 |
| Travel Related to Using Government Services & Civic Obligations | 16.67 |
| Vehicle Repair & Maintenance (by self) (e.g., changing oil, putting air in tires, washing car) | 16.22 |
| Picking up/Dropping off Household Children | 16.19 |
| Using Veterinary Services (e.g., purchasing medicine for a pet; talking to/with vet) | 16.07 |
| Telephone Calls To/From Government Officials (e.g., police, firefighters) | 16.04 |
| Waiting Associated with Work-related Activities | 15.79 |
| Physical Care for Household Children (e.g., dressing child, changing child's diaper, putting child to bed) | 15.60 |
| Caring for Non-household Adults (e.g., bathing adult, supervising adult) | 15.53 |
| Waiting Associated with Research/Homework (e.g., waiting for study group) | 14.55 |
| Security Procedures Related to Traveling (e.g., opening bags for security search) | 14.41 |
| Kitchen and Food Clean-up (e.g., cleaning up after a meal, washing/drying dishes) | 14.14 |
| Job Search and Interviewing (e.g., sending out resumes, interviewing) | 13.82 |
| Financial Services and Banking (e.g., doing banking, applying for loan, meeting with an accountant, waiting in line at the bank) | 13.56 |
| Travel Related to Caring For & Helping Household Members | 13.33 |
| Telephone calls to/from household service providers (e.g., pet sitter, plumber) | 13.11 |
| Caring for Household Adults (e.g., bathing adult, supervising adult) | 13.04 |
| Income-generating Services (e.g., babysitting for pay) | 12.87 |
| Physical Care for Non-household Children (e.g., dressing child, changing child's diaper, putting child to bed) | 12.50 |
| Telephone calls to/from paid child or adult care providers (e.g., day care provider) | 12.38 |
| Activities Related to Non-household Children's Health (e.g., taking child's temperature, accompanying child to medical appointment) | 11.82 |
| Health-related Self-Care (e.g., taking medicine, putting ice on injury, feeling sick) | 11.46 |
| Purchasing Gas | 11.21 |
| Income-generating Rental Property Activities (e.g., maintaining/renovating rental properties) | 11.11 |
| Security Procedures Related to Professional/Personal Services (e.g., opening bags for security search) | 11.01 |
| Research/homework for Class for Degree, Certification, or Licensure | 10.78 |
| Telephone Calls to/from education service providers (e.g., teacher) | 10.62 |
| Personal Care Emergencies (e.g., being involved in a personal accident, losing consciousness) | 10.58 |
| Security Procedures Related to Consumer Purchases (e.g., opening bags for security search) | 10.26 |
| Household Management (e.g., paying rent, making shopping lists) | 10.00 |
| Telephone calls to/from professional or personal care service providers (e.g., banker, lawyer) | 9.91 |
| Using Government Services (e.g., using police and fire services, using social services, obtaining licenses & paying fines, fees, and taxes) | 9.68 |
| Civic Obligations & Participation (e.g., serving on jury duty) | 9.28 |
| Activities Related to Household Children's Health (e.g., taking child's temperature, accompanying child to medical appointment) | 8.77 |
| Medical and Care Services (e.g., having dental work done, receiving in-home healthcare, waiting in the physician's office) | 7.96 |
| Security Procedures Related to Government Services/Civic Obligations (e.g., opening bags for security search) | 7.55 |
| Security Procedures as Part of Job (e.g., opening bags for security search) | 6.38 |
| Travel Related to Work | 6.36 |
| Working at Job (e.g., at work for main job or other job(s)) | 6.19 |
| Waiting Associated with Government Services/Civic Obligations | 5.41 |

Table S8

*Percent of Participants from Crowdsourcing Study Who Identified Each Discretionary Activity as Social (vs. Solo)*

|  |  |
| --- | --- |
| **Activity** | **% of Participants Identifying Discretionary Time as Social** |
| Playing Volleyball | 93.07 |
| Playing Football | 91.84 |
| Playing Sports with Household Children | 90.91 |
| Socializing and Communicating with Others | 89.90 |
| Playing Racquet Sports | 89.90 |
| Playing Billiards | 89.69 |
| Playing Baseball | 89.22 |
| Playing Hockey | 89.00 |
| Playing Basketball | 88.12 |
| Playing Softball | 87.88 |
| Dancing | 87.76 |
| Playing Rugby | 87.00 |
| Playing Soccer | 86.87 |
| Boating | 85.86 |
| Travel Related to Socializing and Communicating | 84.69 |
| Playing Sports with Non-Household Children | 83.84 |
| Participating in Water Sports | 83.67 |
| Golfing | 83.00 |
| Bowling | 82.47 |
| Wrestling | 82.18 |
| Fencing | 80.61 |
| Attending Performing Arts | 79.21 |
| Attending Movies/Films | 79.00 |
| Travel Related to Attending or Hosting Social Events | 78.57 |
| Participating in Martial Arts | 76.04 |
| Participating in Rodeo Competitions | 75.51 |
| Playing Games | 74.26 |
| Travel Related to Arts and Entertainment | 73.40 |
| Attending Gambling Establishments | 70.41 |
| Vehicle Touring/Racing | 70.41 |
| Participating in Equestrian Sports | 70.21 |
| Personal/Private Activities (e.g., making out, having sex) | 68.75 |
| Climbing, Spelunking, Caving | 65.98 |
| Skiing, Ice Skating, Snowboarding | 60.61 |
| Attending Museums | 59.79 |
| Travel Related to Relaxing and Leisure | 59.60 |
| Watching Rodeo Competitions | 59.60 |
| Watching Football | 59.38 |
| Rollerblading | 58.59 |
| Hiking | 57.58 |
| Watching Baseball | 57.14 |
| Watching Hockey | 57.14 |
| Watching Vehicle Touring/Racing | 57.00 |
| Watching Equestrian Sports | 53.00 |
| Watching Soccer | 53.00 |
| Watching Gymnastics | 50.52 |
| Watching People Wrestling | 49.50 |
| Watching Basketball | 48.98 |
| Watching Softball | 48.42 |
| Watching Rollerblading | 47.42 |
| Watching Rugby | 47.42 |
| Watching Billiards | 46.39 |
| Watching Volleyball | 45.26 |
| Watching Dancing | 44.44 |
| Watching Martial Arts | 44.44 |
| Watching Skiing, Ice Skating, Snowboarding | 44.44 |
| Hunting | 44.44 |
| Watching Fencing | 42.86 |
| Watching Golfing | 42.86 |
| Watching Climbing, Spelunking, Caving | 41.24 |
| Doing Gymnastics | 41.24 |
| Watching Racquet Sports | 40.82 |
| Watching Water Sports | 40.63 |
| Television and Movies (Not Religious) | 40.40 |
| Fishing | 39.39 |
| Television and Movies (Religious) | 38.61 |
| Doing Aerobics | 38.00 |
| Watching Bowling | 37.76 |
| Watching Running | 37.76 |
| Watching Boating | 36.73 |
| Watching Biking | 36.08 |
| Watching Weightlifting/Strength Training | 35.35 |
| Security Procedures Related to Arts & Entertainment | 35.35 |
| Watching People Working Out | 33.68 |
| Doing Yoga | 33.67 |
| Watching Fishing | 32.63 |
| Tobacco and Drug Use | 32.00 |
| Hobbies, Except Arts and Crafts and Collecting | 29.00 |
| Weightlifting/Strength Training | 29.00 |
| Biking | 28.28 |
| Watching Aerobics | 26.26 |
| Walking | 25.77 |
| Working Out | 22.45 |
| Running | 22.22 |
| Watching Walking | 20.83 |
| Arts and Crafts as a Hobby | 18.37 |
| Listening to/Playing Music (Not Radio) | 17.53 |
| Using Cardiovascular Equipment | 16.67 |
| Collecting as a Hobby | 15.15 |
| Relaxing, Thinking | 14.43 |
| Computer Use for Leisure | 14.14 |
| Writing for Personal Interest | 13.27 |
| Listening to the Radio | 13.00 |
| Reading for Personal Interest | 12.50 |

Table S9

*Percent of Participants from Crowdsourcing Study Who Identified Each Discretionary Activity as Active (vs. Passive)*

|  |  |
| --- | --- |
| **Activity** | **% of Participants Identifying Discretionary Time as Active** |
| Bowling | 93.00 |
| Participating in Water Sports | 93.00 |
| Playing Volleyball | 92.93 |
| Playing Rugby | 92.16 |
| Participating in Equestrian Sports | 92.00 |
| Playing Baseball | 91.18 |
| Weightlifting/Strength Training | 91.18 |
| Biking | 91.18 |
| Playing Sports with Household Children | 91.18 |
| Doing Aerobics | 91.00 |
| Participating in Martial Arts | 91.00 |
| Personal/Private Activities (e.g., making out, having sex) | 90.91 |
| Rollerblading | 90.91 |
| Wrestling | 90.10 |
| Playing Sports with Non-Household Children | 90.00 |
| Fencing | 90.00 |
| Playing Hockey | 90.00 |
| Working Out | 90.00 |
| Running | 89.90 |
| Playing Soccer | 89.90 |
| Playing Racquet Sports | 89.80 |
| Golfing | 89.69 |
| Climbing, Spelunking, Caving | 89.22 |
| Doing Gymnastics | 89.22 |
| Playing Football | 89.11 |
| Dancing | 89.00 |
| Hunting | 89.00 |
| Walking | 88.24 |
| Playing Softball | 88.12 |
| Playing Basketball | 88.00 |
| Skiing, Ice Skating, Snowboarding | 87.13 |
| Participating in Rodeo Competitions | 86.14 |
| Using Cardiovascular Equipment | 85.15 |
| Doing Yoga | 85.00 |
| Hiking | 84.00 |
| Vehicle Touring/Racing | 83.00 |
| Boating | 81.37 |
| Playing Games | 80.81 |
| Fishing | 80.81 |
| Writing for Personal Interest | 76.24 |
| Playing Billiards | 75.00 |
| Hobbies, Except Arts and Crafts and Collecting | 74.75 |
| Travel Related to Attending or Hosting Social Events | 72.55 |
| Travel Related to Arts and Entertainment | 70.71 |
| Travel Related to Socializing and Communicating | 69.00 |
| Arts and Crafts as a Hobby | 67.65 |
| Attending Museums | 67.33 |
| Socializing and Communicating with Others | 65.66 |
| Travel Related to Relaxing and Leisure | 64.00 |
| Attending Gambling Establishments | 56.86 |
| Reading for Personal Interest | 56.57 |
| Security Procedures Related to Arts & Entertainment | 54.00 |
| Collecting as a Hobby | 47.52 |
| Computer Use for Leisure | 43.00 |
| Attending Performing Arts | 36.00 |
| Attending Movies/Films | 35.35 |
| Tobacco and Drug Use | 34.65 |
| Watching Climbing, Spelunking, Caving | 33.33 |
| Relaxing, Thinking | 33.00 |
| Listening to/Playing Music (Not Radio) | 31.00 |
| Watching Skiing, Ice Skating, Snowboarding | 24.75 |
| Television and Movies (Religious) | 24.00 |
| Watching Weightlifting/Strength Training | 23.76 |
| Watching Baseball | 23.53 |
| Watching Water Sports | 22.22 |
| Watching Dancing | 22.00 |
| Watching Rugby | 20.79 |
| Listening to the Radio | 20.20 |
| Watching Hockey | 20.20 |
| Watching Martial Arts | 20.20 |
| Watching Football | 20.00 |
| Watching Soccer | 19.00 |
| Watching Biking | 18.81 |
| Television and Movies (Not Religious) | 18.00 |
| Watching Basketball | 18.00 |
| Watching Fencing | 17.82 |
| Watching Walking | 17.65 |
| Watching People Wrestling | 17.35 |
| Watching People Working Out | 17.00 |
| Watching Aerobics | 16.83 |
| Watching Gymnastics | 16.16 |
| Watching Bowling | 16.00 |
| Watching Equestrian Sports | 15.84 |
| Watching Running | 15.84 |
| Watching Softball | 15.84 |
| Watching Boating | 15.15 |
| Watching Golfing | 15.00 |
| Watching Volleyball | 14.71 |
| Watching Racquet Sports | 13.86 |
| Watching Fishing | 13.00 |
| Watching Rodeo Competitions | 12.87 |
| Watching Billiards | 12.12 |
| Watching Rollerblading | 12.00 |
| Watching Vehicle Touring/Racing | 10.00 |

Table S10

*Percent of Participants from Crowdsourcing Study Who Identified Each Discretionary Activity as Productive (vs. Nonproductive)*

|  |  |
| --- | --- |
| **Activity** | **% of Participants Identifying Discretionary Time as Productive** |
| Working Out | 94.90 |
| Hobbies, Except Arts and Crafts and Collecting | 91.84 |
| Running | 91.00 |
| Reading for Personal Interest | 88.89 |
| Doing Yoga | 88.89 |
| Writing for Personal Interest | 87.88 |
| Weightlifting/Strength Training | 87.88 |
| Using Cardiovascular Equipment | 87.25 |
| Biking | 86.60 |
| Arts and Crafts as a Hobby | 86.00 |
| Socializing and Communicating with Others | 85.00 |
| Attending Museums | 85.00 |
| Doing Aerobics | 85.00 |
| Playing Sports with Household Children | 85.00 |
| Hiking | 84.54 |
| Relaxing, Thinking | 84.00 |
| Participating in Martial Arts | 83.17 |
| Walking | 82.65 |
| Participating in Water Sports | 81.63 |
| Personal/Private Activities (e.g., making out, having sex) | 80.81 |
| Travel Related to Arts and Entertainment | 80.21 |
| Playing Football | 80.00 |
| Playing Racquet Sports | 78.79 |
| Travel Related to Socializing and Communicating | 78.57 |
| Doing Gymnastics | 78.35 |
| Dancing | 78.22 |
| Playing Soccer | 78.22 |
| Playing Basketball | 78.00 |
| Skiing, Ice Skating, Snowboarding | 78.00 |
| Climbing, Spelunking, Caving | 76.77 |
| Playing Hockey | 76.77 |
| Playing Softball | 76.53 |
| Attending Performing Arts | 75.51 |
| Playing Sports with Non-Household Children | 75.51 |
| Playing Baseball | 75.51 |
| Participating in Equestrian Sports | 75.00 |
| Fishing | 74.26 |
| Travel Related to Relaxing and Leisure | 74.23 |
| Rollerblading | 74.00 |
| Playing Volleyball | 74.00 |
| Travel Related to Attending or Hosting Social Events | 73.47 |
| Listening to/Playing Music (Not Radio) | 72.73 |
| Playing Rugby | 72.63 |
| Collecting as a Hobby | 71.29 |
| Attending Movies/Films | 69.07 |
| Bowling | 68.37 |
| Wrestling | 68.37 |
| Security Procedures Related to Arts & Entertainment | 67.35 |
| Hunting | 67.35 |
| Playing Games | 65.35 |
| Boating | 64.29 |
| Golfing | 63.73 |
| Fencing | 63.37 |
| Participating in Rodeo Competitions | 63.00 |
| Playing Billiards | 59.18 |
| Listening to the Radio | 59.00 |
| Computer Use for Leisure | 56.44 |
| Vehicle Touring/Racing | 51.52 |
| Television and Movies (Religious) | 45.54 |
| Watching Football | 44.90 |
| Television and Movies (Not Religious) | 44.55 |
| Watching Weightlifting/Strength Training | 42.71 |
| Watching Climbing, Spelunking, Caving | 41.00 |
| Watching Basketball | 39.00 |
| Watching Equestrian Sports | 38.78 |
| Watching Vehicle Touring/Racing | 35.64 |
| Watching Soccer | 35.42 |
| Watching Rodeo Competitions | 35.05 |
| Watching Skiing, Ice Skating, Snowboarding | 35.05 |
| Watching Baseball | 34.69 |
| Watching Golfing | 34.69 |
| Watching Hockey | 34.65 |
| Watching Boating | 34.34 |
| Watching Billiards | 33.67 |
| Watching Biking | 31.31 |
| Watching Water Sports | 31.25 |
| Watching Running | 31.00 |
| Attending Gambling Establishments | 30.69 |
| Watching Martial Arts | 30.61 |
| Watching Gymnastics | 30.30 |
| Watching Racquet Sports | 30.00 |
| Watching Rugby | 29.29 |
| Watching Rollerblading | 29.17 |
| Watching Aerobics | 28.28 |
| Watching People Wrestling | 28.28 |
| Watching Volleyball | 28.13 |
| Watching Bowling | 28.00 |
| Watching Softball | 27.55 |
| Watching Dancing | 26.53 |
| Watching Fishing | 26.26 |
| Watching Fencing | 26.00 |
| Watching Walking | 24.75 |
| Watching People Working Out | 24.74 |
| Tobacco and Drug Use | 15.00 |

**Additional Analyses from Study 2:**

 We present analyses with productive discretionary activities and active activities individually analyzed in this section.

Conducting an OLS regression predicting subjective well-being from the linear and quadratic term of the amount of time spent for each type of discretionary time, we found significant negative quadratic effects of amount of discretionary time on subjective well-being spent on nonproductive activities (*N* = 21,736, *B* = -.004, SE = .001, *t*(21733) = -4.65, *p* < .001, 95% CI [-.005, -.002], R2 = .004; with covariates: *N* = 20,275, *B* = -.003, SE = .001, *t*(20264) = -3.98, *p <*  .001, 95% CI [-.005, -.002], R2 = .032) and passive activities (*N* = 21,736, *B* = -.004, SE = .001, *t*(21733) = -4.65, *p* < .001, 95% CI [-.005, -.002], R2 = .004; with covariates: *N* = 20,275, *B* = -.003, SE = .001, *t*(20264) = -3.90, *p <*  .001, 95% CI [-.005, -.002], R2 = .032).

We also found that the negative quadratic effect was significant, or marginally significant, for productive activities (*N* = 21,736, *B* = -.018, SE = .009, *t*(21733) = -2.00, *p =*  .045, 95% CI [-.036, .000], R2 = .001; with covariates: *N* = 20,275, *B* = -.017, SE = .009, *t*(20264) = -1.86, *p =*  .063, 95% CI [.115, .351], R2 = .030) and for active activities (*N* = 21,736, *B* = -.018, SE = .008, *t*(21733) = -2.12, *p =*  .034, 95% CI [-.034, -.001], R2 = .002; with covariates: *N* = 20,275, *B* = -.018, SE = .008, *t*(20264) = -2.12, *p =*  .034, 95% CI [-.034, -.001], R2 = .033). However, the negative quadratic effect was significantly smaller for productive (vs. nonproductive) uses of discretionary time and active (vs. passive) uses of discretionary time, comparing the standardized coefficients of the quadratic (Productive vs. Nonproductive: *F* (1, 21731) = 19.86, *p* < .001; Active vs. Passive: *F* (1, 21731) = 13.32, *p* < .001).

We then used Simonsohn’s (2018) two-lines approach (http://webstimate.org/twolines/) to test for a U-shape in the relationship between discretionary time and life satisfaction for each of these uses of discretionary time. For nonproductive and passive activities, we found evidence of a significant U-shape. We found that for low values of nonproductive or passive activities, the regression line was positive and statistically significant (nonproductive: *b* = .06, *z* = 2.68, *p =* .007; passive: *b* = .06, z = 2.50, *p* = .012; solo: *b* = .05, z = 1.91, *p* = .056); however, for high values of discretionary time of nonproductive or passive activities, the regression line was negative and statistically significant (nonproductive: *b* = -.04, *z* = -6.84, *p <* .001; passive: *b* = -.05, z = -7.52, *p* < .001; solo: *b* = -.05, z = -7.59, *p* < .001).

Due to the low number of activities specified as productive activities and thus high number of zeros in our data, we could not conduct the U-shaped test for just productive activities. We thus examined the U-shaped test with just active activities in this section. We did not find evidence of the U-shape test for active activities. In particular, we found that for low values of active discretionary time, the regression line was positive and statistically significant (*b* = 10.42, z = 1.98, *p* = .048); however, for high values of discretionary time, the regression line was also positive but did not reach statistical significance (*b* = .037, z = 1.45, *p* = .146; break point = 0.12 hours).

1. In some cases, when the Specific categories within an Intermediate category appeared to be very different, we presented participants with the Specific categories. For example, the Intermediate category Caring for & Helping Household Children included a wide range of Specific categories, such as waiting to pick up child and playing sports with child, that we thought might differ in terms of being discretionary or not. [↑](#footnote-ref-1)