Waiting with purpose: A reliable but small association between purpose in life and impulsivity

Article in Personality and Individual Differences · February 2016
DOI: 10.1016/j.paid.2015.11.010

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Waiting with purpose: A reliable but small association between purpose in life and impulsivity

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A R T I C L E   I N F O

Article history:
Received 25 August 2015
Received in revised form 4 November 2015
Accepted 5 November 2015
Available online xxxx

Keywords:
Purpose in life
Delay discounting
Impulsivity
Prospection
Future rewards

A B S T R A C T

Purpose in life contributes to health and wellbeing. We examine the link between purpose and behavioral impulsivity that may account for these benefits. In a community sample of 503 adults, we found a small yet reliable positive association between purpose and valuing future rewards on a delayed discounting task, a behavioral index of impulsivity. This bootstrapped correlation remained after accounting for Big-5 personality traits, positive affect, and demographic characteristics, suggesting a unique and robust link between purpose and impulsivity (r = .1). We interpret this connection as evidence that purpose enables a broader life view, which serves to inhibit impulsive distractions.

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1. Introduction

Purpose serves as an overarching framework that optimizes health and outcomes for those who have it. To have purpose in life is to be guided by “a self-organizing life aim that organizes and stimulates goals, manages behaviors, and provides a sense of meaning” (McKnight & Kashdan, 2009; p. 242). Purposeful individuals possess a dispositional and prospective sense that systematically guides their actions toward future achievements (Damon, Menon, & Bronk, 2003). By temporally orienting one’s self toward a long view, purposeful individuals may limit the perceived value of proximal opportunities in order to take advantage those of greater rewards to come.

Impulsivity, on the other hand, generally refers to the lack of forethought or consideration of consequences associated with one’s actions. While impulsive behaviors are not inherently wrong or malicious, they are often characterized as destabilizing and risky because they are undertaken with inadequate regard for one’s circumstances (Eysenck & Eysenck, 1977) and can lead to undesirable outcomes. One common assessment of impulsivity involves asking individuals to choose between two rewards: an immediate and less valuable choice ($100 today) or a future and more valuable choice ($125 in one month). Individuals tend to prefer the immediate and less valuable reward — a phenomenon referred to as delay discounting (Estle, Green, Myerson, & Holt, 2006; Myerson, Green, & Warusawitharan, 2001). Conceptually, impulsive individuals would lack the long view one observes in purposeful individuals. In the current study, we investigated the link between dispositional sense of purpose in life and behavioral impulsivity. Individuals that do not discount the value of delayed rewards are predicted to have a greater sense of purpose in life. Importantly, we accounted for well-known correlates of purpose (e.g., personality traits, and positive affect; Burrow & Hill, 2011; Scheier et al., 2006) as well as demographic characteristics (age, gender, education) in our analyses so to better identify the unique and independent link between purpose and impulsivity.

2. Methods and materials

2.1. Participants

Data were collected as part of the Human Connectome Project, an open access big data initiative dedicated to understanding brain function and behavior (Van Essen et al., 2013). The current sample was from the November 2014 data release (500 Subjects + MEG2; http://www.humanconnectome.org). Behavioral and demographic data were analyzed from 503 healthy adults (59% women; see Table 1 for demographic information). Eleven participants lacked data for years of education. Participants completed a comprehensive battery of assessment tools including the NIH Toolbox for Assessment of Neurological and Behavioral Function (www.nihtoolbox.org) and auxiliary measures. The Toolbox includes measures of cognitive, emotional, motor and...
sensory processes in healthy individuals. Participants also completed measures of visual processing, personality and adaptive function, fluid intelligence, behavioral measures of emotion processing, and delay discounting.

2.2. Purpose

Purpose was assessed by self-report as part of the NIH Toolbox on Emotion, which includes both hedonic and eudaimonic components of psychological well-being, including the Meaning and Purpose survey. This 18-item questionnaire is composed of items taken from psychometrically validated assessments of purpose (http://www.nihtoolbox.org/WhatAndWhy/Emotion/PsychologicalWell-Being). For example, “My life has a clear sense of purpose” (1 = Strongly disagree; 2 = Disagree; 3 = Neither agree nor disagree; 4 = Agree; 5 = Strongly agree). Higher values indicate a greater sense of purpose.

2.3. Delay discounting

A measure of impulsivity, delay discounting estimates the underestimation of future rewards. This current estimate of delay discounting used a discounting task that identified indifference points where a person is equally likely to choose a smaller reward ($100 today) sooner versus a larger reward later ($200 in 3 years). Delays were fixed and reward amounts were adjusted on a trial-by-trial basis determined by the participants’ choices in order to identify indifference points. This approach has been validated to provide reliable estimates of delay discounting (Estle et al., 2006). The area-under-the-curve discounting measure (AUC) provides a valid and reliable summary measure of how steeply an individual discount delayed rewards (Estle et al., 2006).

2.4. Covariates

Personality measures of agreeableness, openness, conscientiousness, neuroticism, and extroversion were assessed with the 60-item version of Five Factor Inventory (NEO-FFI). Positive Affect was estimated with the NIH Toolbox on Emotion (http://www.nihtoolbox.org/WhatAndWhy/Emotion/PsychologicalWell-Being). For each measure, higher scores indicate greater levels.

3. Results

Intercorrelations among purpose, delay discounting and the covariates (age, gender, education, positive affect, agreeableness, openness, conscientiousness, neuroticism, and extroversion), as well as the present sample’s maximum, minimum, mean, and SD of these scores can be found in Table 1. Our central question was how purpose and delay discounting relate. We found a significant correlation between purpose and delay discounting of small rewards ($r(501) = .10, p < .05, 95% CI: .01-.18) and a trend in the relationship with large rewards ($r(501) = .07, p = .055, single-tailed, 95% CI: -.02-.16). The reliability of all correlations (95% confidence intervals) was based on 5000 bootstrap resamples. Next, we further assessed this relationship by partialling out the correlation between purpose and delay discounting of small rewards (pr(481) = .13, p < .005, 95% CI: .03-.21) and large rewards (pr(481) = .11, p < .05, 95% CI: .02-.20).
4. Discussion

Despite growing evidence that a sense of purpose in life plays an important role in wellbeing, its implications for behavior have received little attention. The present study provides evidence that a greater sense of purpose in life is associated with lower impulsivity, demonstrated via a monetary delay discounting task. Consistent with our hypothesis, individuals who reported having a greater sense of purpose preferred larger future gains to smaller immediate ones. Importantly, these results persisted after accounting for dispositions in personality traits and positive affect, suggesting a robust and unique association between having purpose and future oriented behavior.

Our results are consistent with theoretical perspectives on purpose, suggesting it engenders a prospective outlook (Hicks, Trent, Davis, & King, 2012). To the extent that purpose tunes individuals’ conscious attention toward experiences and goals they anticipate accomplishing, it may enable acting in the present in ways that secure future rewards. Indeed, there is evidence that even brief episodes of thinking about specific future events can significantly reduce the rate of delay discounting. Young adults prompted to provide a detailed description of what they would be doing on a day, several months in the future, were more likely to accept a monetary award on that distant day than a smaller amount immediately (Peters & Büchel, 2010). Thus, purposeful individuals may forgo immediate gratification in favor of investing in their future, closer to when their ultimate aims will be actualized. Further to this end, purpose may limit engagement in known risk behaviors linked to impulsivity, such as cigarette smoking (Bickel, Odum, & Madden, 1999), and drug use and gambling (Reynolds, 2006) by making the downstream gains associated with avoiding them more salient. These examples reflect some of the decision points for which a sense of purpose may countermand impulsive behavior.

4.1. Conclusion

Overall, this paper provides initial empirical support for the link between purpose and behavioral impulsivity, and sets a course for further inquiry into factors that may drive this association. That purposeful individuals display a reluctance to grasp at immediate rewards at the expense of obtaining larger, future gains is consistent with accumulating evidence of the adaptive role of purpose, and offers a glimpse into how it serves as a behavioral asset for those who cultivate it.

Acknowledgments

Data were provided by the Human Connectome Project, WU-Minn Consortium (Principal Investigators: David Van Essen and Kamil Ugurbil; 1U54MH091657) funded by the 16 NIH Institutes and Centers that support the NIH Blueprint for Neuroscience Research; and by the McDonnell Center for Systems Neuroscience at Washington University. R.N.S. is supported in part by the Institute for Social Sciences at Cornell University.

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