

Balloon Analogue Risk Task (BART) Performance Indicators Help Predict Outcomes of Matched Savings Program

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Abstract : Reduced mental-bandwidth related to low socioeconomic status (low-SES) might lead to impulsivity and risk-taking behavior, which poses as a major hurdle towards asset building (savings) behavior. Understanding the relationship between risk-related personality metrics as well as laboratory risk behavior and real-life savings behavior can help facilitate the development of effective asset building programs, which are vital for mitigating financial vulnerability and income inequality. As such, this study explored the relationship between personality metrics, laboratory behavior in a risky decision-making task and real-life asset building (savings) behaviors among individuals with low-SES from Miami, Florida (FL). Study participants (12 male, 15 female) included racially and ethnically diverse adults (mean age 41.22 ± 12.65 years), with incomplete higher education (18% had High School Diploma, 30% Associates, and 52% Some College), and low annual income (mean $\$13,872 \pm \8020.43). Participants completed eight self-report surveys and played a widely used risky decision-making paradigm called the Balloon Analogue Risk Task (BART). Specifically, participants played three runs of BART (20 trials in each run; total 60 trials). In addition, asset building behavior data was collected for 24 participants who opened and used savings accounts and completed a 6-month savings program that involved monthly matches, and a final reward for completing the savings program without any interim withdrawals. Each participant's total savings at the end of this program was the main asset building indicator considered. In addition, a new effective use of average pump bet (EUAPB) indicator was developed to characterize each participant's ability to place winning bets. This indicator takes the ratio of each participant's total BART earnings to average pump bet (APB) in all 60 trials. Our findings indicated that EUAPB explained more than a third of the variation in total savings among participants. Moreover, participants who managed to obtain BART earnings of at least 30 cents out of their APB, also tended to exhibit better asset building (savings) behavior. In particular, using this criterion to separate participants into high and low EUAPB groups, the nine participants with high EUAPB (mean BART earnings of 35.64 cents per APB) ended up with higher mean total savings ($\$255.11$), while the 15 participants with low EUAPB (mean BART earnings of 22.50 cents per APB) obtained lower mean total savings ($\$40.01$). All mean differences are statistically significant (2-tailed $p \leq .0001$) indicating that the relation between higher EUAPB and higher total savings is robust. Overall, these findings can help refine asset building interventions implemented by policy makers and practitioners interested in reducing financial vulnerability among low-SES population. Specifically, by helping identify individuals who are likely to readily take advantage of savings opportunities (such as matched savings programs) and avoiding the stipulation of unnecessary and expensive financial coaching programs to these individuals. This study was funded by J.P. Morgan Chase (JPMC) and carried out by scientists from Florida International University (FIU) in partnership with Catalyst Miami.

Keywords : balloon analogue risk task (BART), matched savings programs, asset building capability, low-SES participants

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