

Risky health choices and the balloon economic risk protocol

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Abstract

Despite a wealth of experimental contributions on risk preferences, stemming from a variety of elicitation tasks, the external validity of these measures is questionable. In this study we focus on a risk task - the Balloon Analogue Risk Task (BART), which is highly successful in predicting health related risk behaviors such as alcohol use, drugs use, smoking, unprotected sex, driving without a seatbelt, and stealing. The BART is not commonly used by economic scholars because of concerns that participants may not adequately comprehend uncertainty associated with the task and because of the resulting difficulty in relating participants' choices to standard risk models. To answer these concerns and build on associations with real world risk, we designed a modified BART, which we will refer to as the Balloon Economic Risk Protocol (BERP). In this version, participants observe the distribution of pop points prior to the task to create a more consistent knowledge base. We then use a novel belief elicitation technique to produce a user-generated prior distribution of balloon pops. Using these measures, we compare participants' behavior to the expected-value maximum optimum to provide a link to standard models of risk. In accordance with past economic literature, we found that participants BERP-generated risk preferences revealed mild risk aversion on average, and correlated with a self-report questionnaire on drinking, drugs use, and smoking behavior. In summary, we describe the BERP, which relates choice under uncertainty to real-world risk taking while preserving its ability to compare participant choice to optimal behavior.