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Behavioral Economics: What You Need to Know

OMAR GALÁRRAGA, PHD

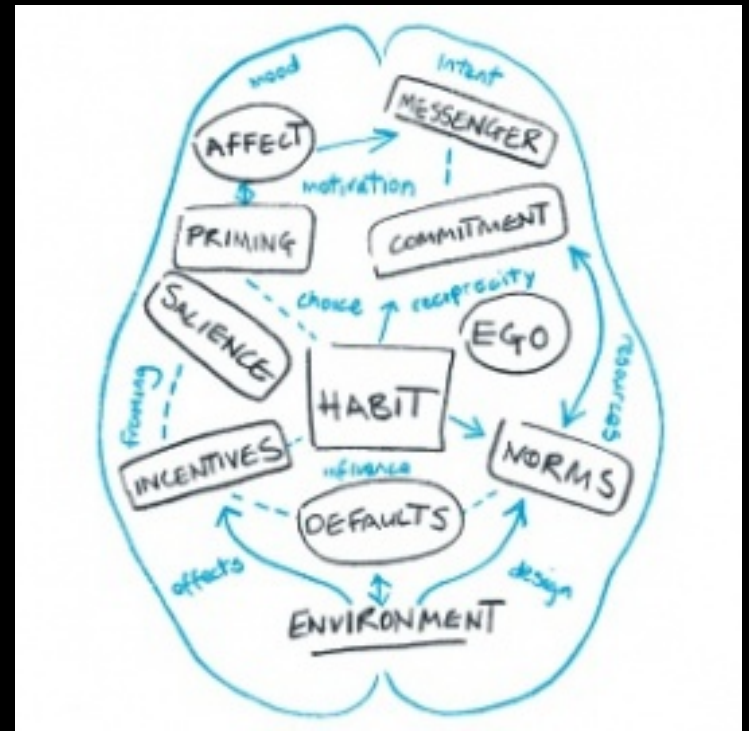
**Brown University School of Public Health
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What is Behavioral Economics?

- Humans are irrational!
- Economics meets Psychology: accounts for social, cognitive, and emotional factors
- Behavior change strategies better aligned with “real world” and real people
- Provides tools for leaders and change agents



(Camerer, Colin & Loewenstein, George, 2002)

We know what's good for us...



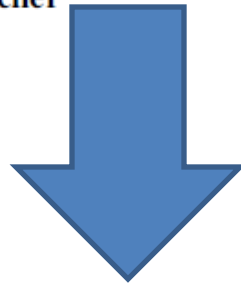
..but we have difficulty sticking to our decisions



*Behavioral economics
can help us
understand why...*

Behavioral Economics Matters for HIV Research: The Impact of Behavioral Biases on Adherence to Antiretrovirals (ARVs)

Sebastian Linnemayr¹ · Chad Stecher²



**Other aspects of
behavioral economics;
not just incentives:**

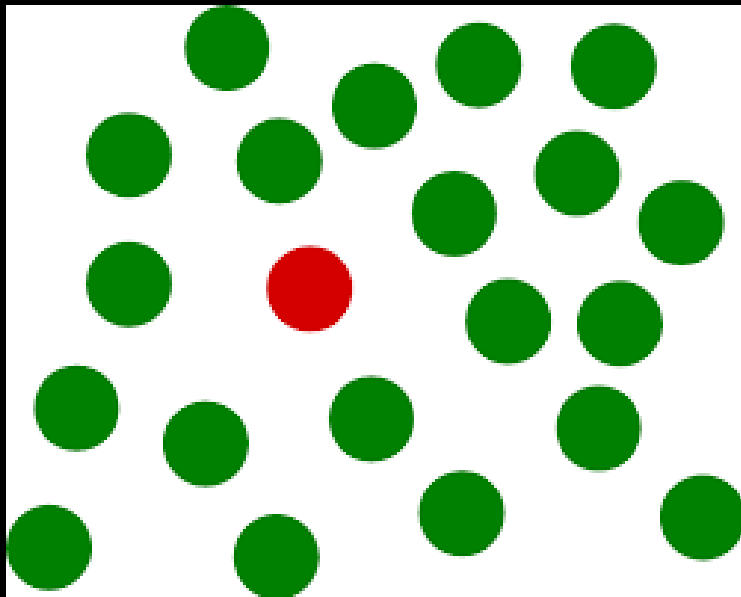
- **Present bias** → Small, variable incentives for participation or for adherence (measured with MEMS) in Uganda
- **Salience** → how to best customize/deliver the messages
- **Over-optimism** → reminders



Present bias



Saliience



Over optimism



Preferences	<i>Present bias</i>	Consumers place undue weight on recent events and too little on far off ones.
	<i>Reference dependence and loss aversion</i>	Consumer evaluate offerings not on an absolute scale, but relative to what they already have(or were expecting).
	<i>Regret and other emotions</i>	People are susceptible to emotions and act to avoid stress.
Beliefs	<i>Overconfidence</i>	People can exhibit seemingly unreasonable assessments of the probability of being correct or nothing going wrong.
	<i>Over-extrapolation</i>	Consumers under estimate uncertainty by basing predictions on very few observations.
	<i>Projection bias</i>	People expect their current tastes and preferences to remain unchanged in the future.
Decision-making	<i>Framing, salience and limited attention</i>	The person being communicated with can perceive the same information as different depending upon how the information is presented.
	<i>Mental accounting and narrow bracketing</i>	People hold themselves to budgets in different categories and consider decisions in isolation.
	<i>Decision-making rules of thumb</i>	People simplify complex decisions by adopting particular rules of thumb (heuristics).
	<i>Persuasion and social influence</i>	Consumers make assumptions on the trustworthiness of an individual – by appearance, technique, brand...

Poverty Impedes Cognitive Function

Anandi Mani,¹ Sendhil Mullainathan,^{2*} Eldar Shafir,^{3*} Jiaying Zhao⁴

The poor often behave in less capable ways, which can further perpetuate poverty. We hypothesize that poverty directly impedes cognitive function and present two studies that test this hypothesis. First, we experimentally induced thoughts about finances and found that this reduces cognitive performance among poor but not in well-off participants. Second, we examined the cognitive function of farmers over the planting cycle. We found that the same farmer shows diminished cognitive performance before harvest, when poor, as compared with after harvest, when rich. This cannot be explained by differences in time available, nutrition, or work effort. Nor can it be explained with stress: Although farmers do show more stress before harvest, that does not account for diminished cognitive performance. Instead, it appears that poverty itself reduces cognitive capacity. We suggest that this is because poverty-related concerns consume mental resources, leaving less for other tasks. These data provide a previously unexamined perspective and help explain a spectrum of behaviors among the poor. We discuss some implications for poverty policy.



Poverty Impedes Cognitive Function
Anandi Mani *et al.*
Science **341**, 976 (2013);
DOI: 10.1126/science.1238041



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Incentives: one aspect of behavioral economics

AIDS Behav (2013) 17:2283–2292

DOI 10.1007/s10461-013-0415-2

SUBSTANTIVE REVIEW

Conditional Economic Incentives to Improve HIV Treatment Adherence: Literature Review and Theoretical Considerations

Omar Galárraga • Becky L. Genberg •
Rosemarie A. Martin • M. Barton Laws •
Ira B. Wilson



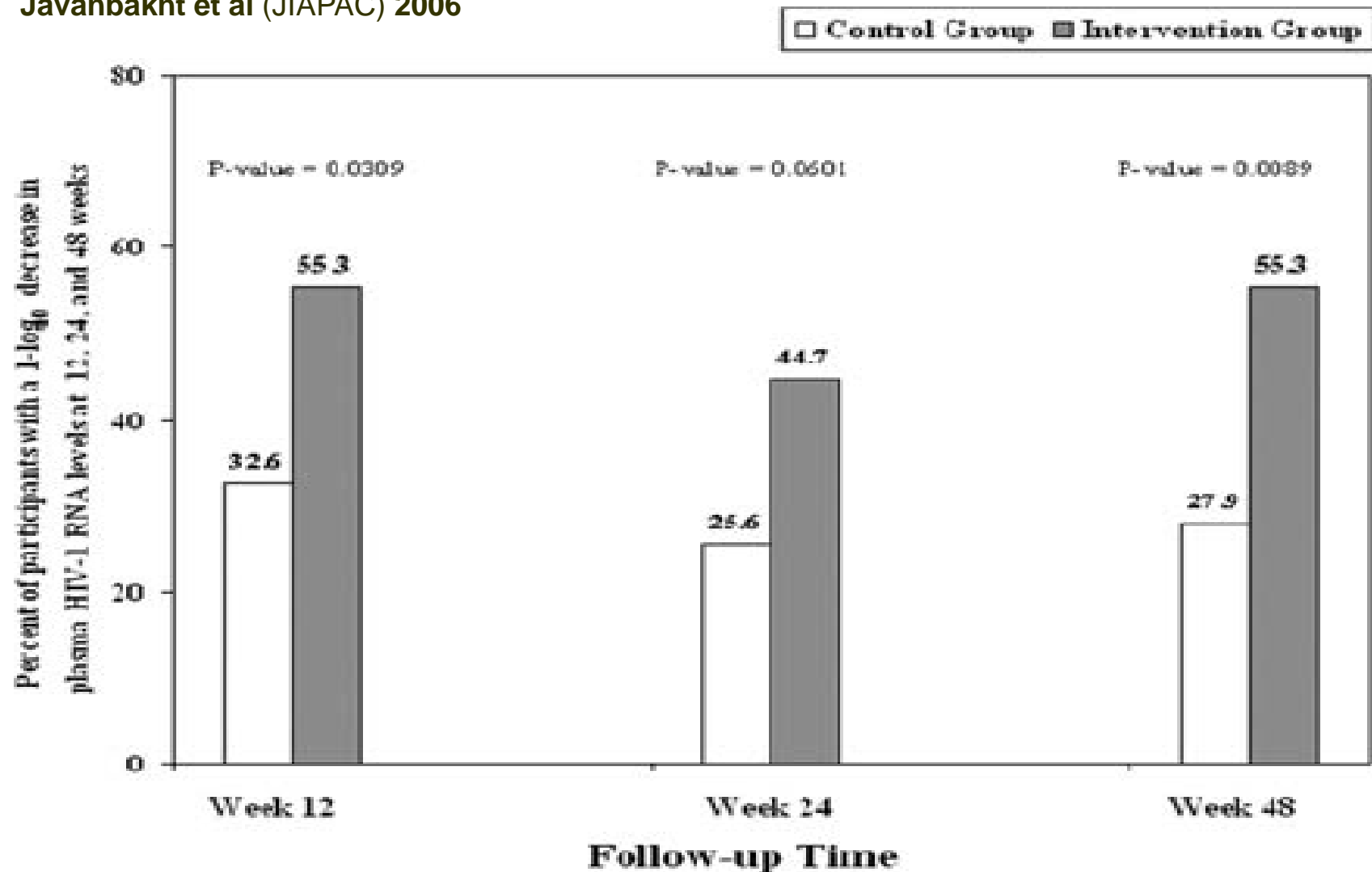


Figure 1 Proportion of participants with 1-log₁₀ reductions in plasma HIV-1 RNA levels at follow-up weeks 12, 24, and 48, by intervention group.

A Study of Financial Incentives to Reduce Plasma HIV RNA Among Patients in Care

Steven Farber · Janet Tate · Cyndi Frank ·
David Ardito · Michael Kozal · Amy C. Justice ·
R. Scott Braithwaite

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AIDS Behav (2013) 17:2293–2300
DOI 10.1007/s10461-013-0416-1

ORIGINAL PAPER

Abstract The role of financial incentives in HIV care is not well studied. We conducted a single-site study of monetary incentives for viral load suppression, using each patient as his own control. The incentive size (\$100/quarter) was designed to be cost-neutral, offsetting estimated downstream costs averted through reduced HIV transmission. Feasibility outcomes were clinic workflow, patient acceptability, and patient comprehension. Although the study was not powered for effectiveness, we also analyzed viral load suppression. Of 80 eligible patients, 77 consented, and 69 had 12 month follow-up. Feasibility outcomes showed minimal impact on patient workflow, near-unanimous patient acceptability, and satisfactory patient comprehension. Among individuals with detectable viral loads pre-intervention, the proportion of undetectable viral load tests increased from 57 to 69 % before versus after the intervention. It is feasible to use financial incentives to reward ART adherence, and to specify the incentive by requiring cost-neutrality and targeting biological outcomes.

Using Lotteries to Incentivize Safer Sexual Behavior

Evidence from a Randomized Controlled Trial on HIV Prevention

Martina Björkman Nyqvist

Lucia Corno

Damien de Walque

Jakob Svensson

Abstract

Financial incentives are a promising HIV prevention strategy. This paper assesses the effect on HIV incidence of a lottery program in Lesotho with low expected payments but a chance to win a high prize conditional on negative test results for sexually transmitted infections. The intervention resulted in a 21.4 percent reduction in

HIV incidence over two years. Lottery incentives appear to be particularly effective for individuals willing to take risks. This paper estimates a model linking sexual behavior to HIV incidence and finds that risk-loving individuals reduce the number of unprotected sexual acts by 0.3/month for every \$1 increase in the expected prize.



WORLD BANK GROUP

Development Research Group

Human Development and Public Services Team

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Tested at scale? → *Not yet...
nor in LMIC, however...*

Conditional Cash Transfers for Improving Uptake of Health Interventions in Low- and Middle-Income Countries A Systematic Review

Mylene Lagarde, MSc

Andy Haines, MD

Natasha Palmer, PhD

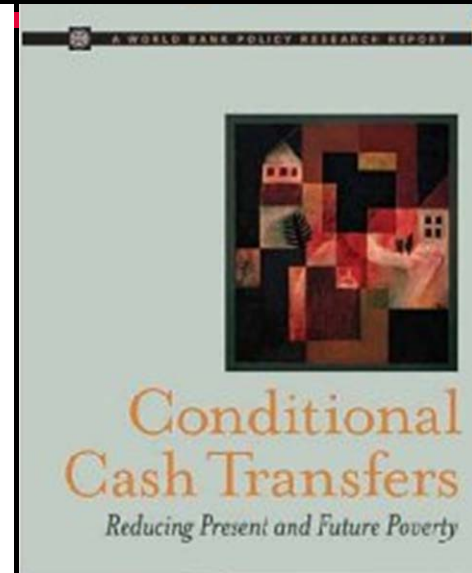
IN THE PAST 10 YEARS, SOME LATIN American countries have introduced programs that provide monetary transfers to households on the condition that they comply with a set of behavioral requirements. These requirements are typically linked to attendance for preventive interventions at primary care facilities and education for children.

These programs are justified on social equity concerns, especially when they target disadvantaged groups. As low-income individuals usually face the greatest barriers to access, such conditional cash mechanisms can also help allocate resources to reduce health

Context Cash transfers conditional on social services, have been introduced in many low- and middle-income countries. The effectiveness of these strategies in different contexts has not previously been the subject of a systematic review.

Objective To assess the effectiveness of conditional monetary transfers in improving access to and use of health services, as well as improving health outcomes, in low- and middle-income countries.

Data Sources Relevant publications were identified via electronic medical and social science databases from inception to April 2006 (PubMed, EMBASE, POPLINE, CAB Direct, Healthcare Management Information Consortium, WHOLIS (World Health Organization Library Database), African Healthline, International Bibliography of the Social Sciences (IBSS), Eldis, British Library for Development Studies (BLDS), ID21



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Mex > 25m
Brazil > 50m

Promoting healthy behaviours and improving health outcomes in low and middle income countries: A review of the impact of conditional cash transfer programmes

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Barriers to scale-up?

- Political will
- Best design?
 - Type of incentive
 - Amount
 - Length
 - Conditional or not
 - CCT (demand) vs. P4P
- Targeting
- Sustainability
- Cost-effectiveness





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Thank you!

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