Thinking beyond the individual in HIV Prevention: behavioral economics what does it offer and what else do we need to think about?

Audrey Pettifor PhD MPH
Department of Epidemiology
University of North Carolina
Overview

- The epidemic and behaviors that lead to transmission and acquisition continue
- Behavioral economics as the answer?
- What about structural factors?
- Where do the two meet and how do they fit in combination prevention approaches?
3.9 million young people in Sub-Saharan Africa aged 15 – 24 years are living with HIV. Three-quarters are young women.

Source: UNAIDS, unpublished estimates, 2010
Note: The map is stylized and not to scale. It does not reflect a position on the part of UNICEF on the legal status of any country or territory or the delimitation of any frontiers. The dotted line represents approximately the Line of Control in Jammu and Kashmir agreed upon by India and Pakistan. The final status of Jammu and Kashmir has not yet been agreed upon by the Parties.
HIV incidence was 4.5% in black African females 20-34yrs

Condom use went down, Knowledge decreased (only 26%), low risk perception (76% at low risk)

“In summary, the findings of the report underscores that while the country is on the right track with the provision of ART, national HIV counselling and testing (HCT) efforts, and greater access of PMTCT, more other biomedical, behavioural, social, and structural prevention interventions are needed to reduce the high rates of new HIV infections”.

Why do people engage in behaviors that lead to HIV infection?
Traditional Economics: People make Rational Choices

“Economic Man makes logical, rational, self-interested decisions that weigh costs against benefits and maximize value and profit to himself. Economic Man is an intelligent, analytic, selfish creature who has perfect self-regulation in pursuit of his future goals and is unswayed by bodily states and feelings. And Economic Man is a marvelously convenient pawn for building academic theories. But Economic Man has one fatal flaw: he does not exist.” Lambert, Harvard Magazine
But in reality humans are...

- Irrational, impulsive, overly optimistic, don’t know what we want, emotional, fall in love, get mad, feel confused...

The adolescent brain
Behavioral Economics: explaining our irrationality

- Behavioral economics— the study of how real people actually make choices. Draws on insights from psychology and economics.

- We are predictably irrational
Adolescents and BE

- BE assumes we are ALL irrational irrespective of age
- However, due to importance of Identity formation, Sensation Seeking and Peer reaction
  Adolescents may be particularly Vulnerable to:
  - Excessive Myopia (Present Bias)
  - Projection Bias
  - Overly optimistic
- Adolescents and young adults may make ‘poor’ decisions because they cannot see what their future self will value
Key concepts in BE

- Scarce Attention
- Status Quo Bias/Default
- Misperception of Social Norms
- Limited Self-control
- Myopia/Present Bias
- Multiple Identities
- Loss Aversion
- Hassle factors
- Overconfidence
We have a hard time paying attention

- Scarce Attention
  - We conserve our attention for what is most pressing but may forget to do things that are more important
  - SMS messaging for adherence
  - Competing attention span - teens receive 80 texts/day
  - College seniors who received vaccine education, chose a day to visit the clinic, and circled the clinic on a map were nine times more likely to obtain tetanus vaccinations than those receiving persuasive education alone. (Leventhal H, J Pers Soc Psychol. 1965)
The location, dates, and times of the influenza vaccination clinics were personalized in each mailer.
We need help making decisions

- Status Quo Bias
  - More Choices make choosing harder
  - People often take the option that requires the least effort-- “Default” option – or may make no choice
  - Choice Architecture- Structure Complex Choices- as choices become more complex people adjust simplifying strategies
Choice Architecture

- Can we make HIV prevention decisions easier?
We worry about what others think and can’t commit

- Misperception of Social Norms
  - Involvement of Peers--the majority of young men in your community know their status- do you?

- Limited Self Control
  - Good intentions but poor follow through
  - Commitment Devices
Commitment Devices: Role in HIV prevention?

Table. Examples of Commitment Devices

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Description</th>
<th>Health Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Put money in a deposit contract</td>
<td>Forfeit money by failure to achieve a specific goal by a given date (e.g., quitting smoking within 6 mo, losing 5 lb within 2 mo)</td>
<td>Any</td>
</tr>
<tr>
<td>Engage in temptation bundling</td>
<td>Restrict access to instantly gratifying experiences (e.g., watching TV) only to occasions when engaging in goal-consistent behaviors (e.g., exercising)</td>
<td>Any</td>
</tr>
<tr>
<td>Purchase vices in small packages</td>
<td>Limit portion sizes for unhealthy items (e.g., cigarettes, junk food, alcohol)</td>
<td>Reduce consumption</td>
</tr>
<tr>
<td>Purchase small plates</td>
<td>Limit food portion sizes</td>
<td>Reduce consumption</td>
</tr>
<tr>
<td>Order groceries online</td>
<td>Avoid purchasing unhealthy foods on impulse</td>
<td>Improve diet</td>
</tr>
<tr>
<td>Take disulfiram</td>
<td>Ensure that drinking alcohol in the future will cause illness</td>
<td>Treat alcoholism</td>
</tr>
<tr>
<td>Seek care at a treatment center</td>
<td>Ensure no access to addictive substances (e.g., alcohol, drugs) until professionals deem a patient ready</td>
<td>Treat addiction</td>
</tr>
<tr>
<td>Purchase an annual gym membership</td>
<td>Ensure future gym visits will not require out-of-pocket payment</td>
<td>Increase exercise</td>
</tr>
<tr>
<td>Schedule workouts with an exercise partner</td>
<td>Disappoint a friend by failure to visit the gym</td>
<td>Increase exercise</td>
</tr>
</tbody>
</table>
I commit to (Select your Goal)

Be on time, study hard, lose weight, no more debt, more time with family, better sleep schedule, eat better, go back to the gym, help others, go jogging, learn something new...

Who's stickKing?

empressdina
creating an authentic lifestyle

martahalm
stop wasting time on the internet

In the news

The numbers

$17,813,243 dollars on the line

245,520 commitments created
Aherk! is a goal-oriented self-blackmailing service in three easy steps:

**STEP 1:**
Define a goal.
Tell us what it is that you want to achieve and set a deadline.

**STEP 2:**
Put your ass on the line.
Upload a compromising picture that will be posted to Facebook in case you fail to achieve your goal.

**STEP 3:**
Your friends decide.
After your deadline expires, your Facebook friends will vote and tell us if you achieved your goal or not.
So is BE here to stay?

- Fundamentally BE is focused on individual decision making – what about structural factors?
- Limited applications to resource constrained settings
  - Many experiments are lab based and those that are field based are mainly in the US
- Some of these ideas have been around for awhile
- BE may be best at “the Nudge”
- Can it help us with framing prevention choices and rewards for goal achievement? Part of a package
Structural Factors that BE may not be able to address

- Gender Power Inequity
- Intimate Partner Violence/Gender Based Violence
- Stigma
- Poverty
- Structural issues relevant to operations and implementation science of prevention
Socio-Ecological Framework (SEF): Levels of Influence on Adherence

- Norms
- Beliefs
- HIV
- Work
- Clinic
- Resources
- Life events
- Family
- Friends
- Male partner
- Product attributes
- Side effects

van der Straten et al., PLOS ONE 2014
Community Mobilization

- One man Can- community randomized trial in 22 communities in the HPTN 068 study area in Agincourt, South Africa.
- Aim to change negative gender norms, gender based violence and HIV risk behaviors among young men through community mobilizing activities… (moving to seek, test, link and retain)
- [http://vimeo.com/90906362](http://vimeo.com/90906362)
Swa Koteka (Yes, we can!)
HPTN 068: Effects of cash transfer and community mobilization for prevention of HIV in young South African women

- Randomized Controlled Trial
- **Intervention**: Cash transfer conditional on school attendance to young woman and family
- **Population**: 2,537 South African young women in grades 8-11, ages 13-20 yrs (Agincourt, South Africa)
- **Primary endpoint**: HIV incidence in young women
- Results 2015
BE and Prevention Packages

- Much of the BE work done in Africa to date has focused on incentives.
- Should think harder about how theories of BE can be applied to our prevention packages—can it help us with framing decision making around prevention?
- What will work in the African setting?
- Structural factors lead to risk in Africa and are real barriers to successful role out and uptake of effective prevention—must intervene on these as well.
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