

# Applying Behavioural insights to HIV prevention and management: a scoping review

## Authors:

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## Background:

Behavioural economics blends insights from psychology and economics to better understand human decision-making. The principles of behavioural economics can inform nudge interventions to encourage healthy behaviours. MINDSPACE (Messenger, Incentives, Norms, Default, Salience, Priming, Affect, Commitment, and Ego) is an acronym developed by the United Kingdom's behavioural insights team to summarize nine key influences on human behavior. We conducted a scoping review to examine how behavioural economics is applied in HIV prevention and management interventions.

## Methods:

We used Arksey and O'Malley's scoping review methodology and searched four databases (Medline, PsycInfo, Scopus and CINAHL) from January 2000 to July 2021. Titles and abstracts were independently screened by two reviewers and a third reviewer resolved any discrepancies. Studies were included if they described their intervention that related to one of the MINDSPACE categories. We used descriptive statistics to summarize the characteristics of the included studies, and narrative synthesis to summarize the findings in each of the categories.

## Results:

We identified 899 studies and 124 studies met the inclusion criteria. Most studies were from high-income countries (n=54) and most HIV prevention and management interventions targeted the general population (n=36 and n=41, respectively). Incentives were the most highly applied effect (n=100), followed by the messenger effect (n=59). We found studies that utilized at least one of the components of MINDSPACE in a variety of settings (including hospitals, community centres, bars and online) and for various populations (including MSM and transgender women (n=16), pregnant women (n=7), children and young adults (n=19), substance users (n=13) and the general population (n=77).

## Conclusion:

The key influences described by the MINDSPACE framework can be used to describe aspects of HIV prevention and management interventions. Further application of nudges using this framework could enhance the design of HIV prevention and management interventions to help people make better health choices.

## Definitions of the MINDSPACE effects

	Definitions
<b>Messenger</b>	Who communicates the information.
<b>Incentive</b>	Response to incentives can depend on how they are presented.
<b>Norms</b>	People are influenced by what others do.
<b>Default</b>	Preset options will be activated unless an active choice occurs.
<b>Saliency</b>	Attention is drawn to something novel or that seems relevant to the target population.
<b>Priming</b>	Exposure to subconscious cues may influence people's performance or choice on a subsequent task.
<b>Affect</b>	Emotional associations that shape actions.
<b>Commitment</b>	Consistency with public promises and reciprocate acts.
<b>Ego</b>	Acting in ways to make one feel better about themselves.

## DECLARATIONS

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### Conflicts of interest

All authors declare they do not have a conflict of interest.

### Availability of data

All relevant data are presented in the manuscript and online supplementary materials. Any further details can be obtained by contacting the corresponding author.

### Code availability

Not applicable

### Authors' contributions

JJO conceptualized the idea. AA and JT performed the screening and extraction of data. AA, JT and JJO wrote the original draft. All authors contributed to the writing of the manuscript and approved the final version for submission.

### Ethics approval

As this is a scoping review, no human participants were involved, and no ethics approval was required.

### Consent to participate

Not applicable

### Consent for publication

Not applicable