

Creating Desire for Microbicides

Role of conjoint analysis in microbicide development

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...[microbicide] acceptability is a complex phenomenon, influenced by multiple factors at each stage—especially the relationship of the actors and the cultures in which they exist.

Simply asking whether people like a product, or if they would recommend it to a friend, is not going to capture the richness of the issue.



Choosing = making tradeoffs

Free Shipping & Price Guarantee Coupons Financing Live Chat 24/7 or Call Advantage Rewards Email Deals

Digital Camera Selector

Narrow Your Selection

Display cameras best suited for

- Automatically focusing faces
- Capturing people in tight spaces
- Photojournalism courses

I want to spend

- < \$200
- 200-300
- 300-500
- 500-800
- 800-1000
- 1000-1500
- > 1500

Brands

Color

- Silver
- Black
- Blue
- Green
- Orange
- Pink
- Red
- White

Resolution

Optical Zoom

Features

Screen Size

Battery Type

Memory Type

Expand All | Collapse All | Clear All

[Digital Camcorder Selector](#)


[Digital Frame Selector](#)

100

RESULTS





Find the Digital Camera that best meets your needs in three easy steps!

1. Select one category at a time from the bar on the left
2. Indicate your preferences by answering questions
3. Scroll down to shop the cameras that best meet your needs

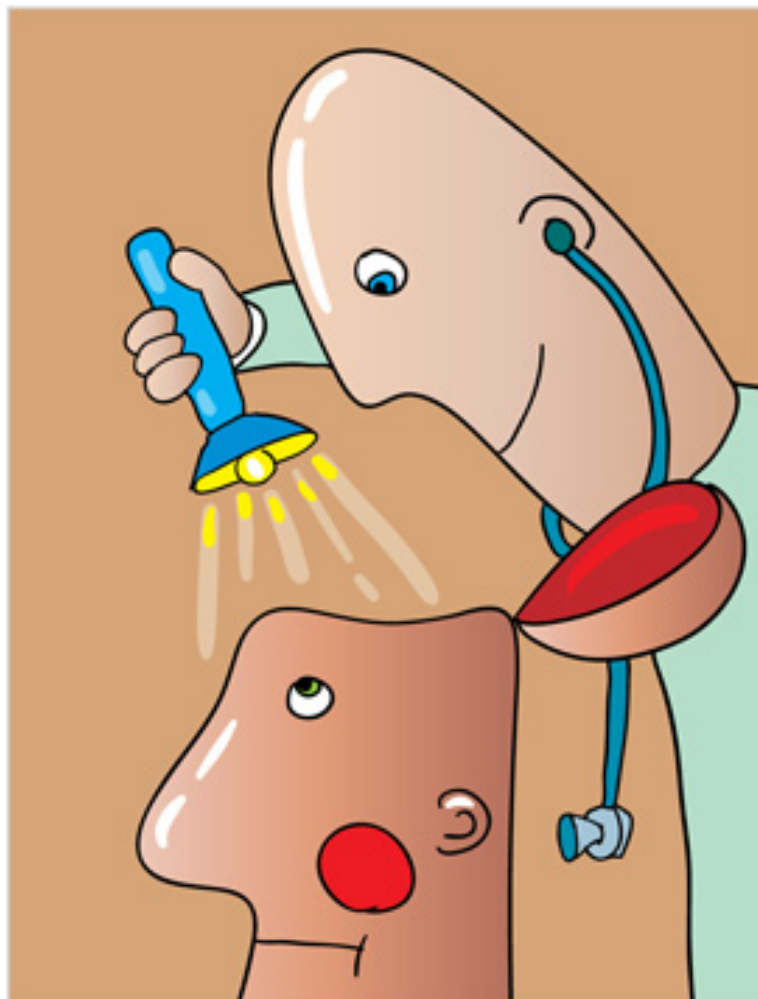


Showing Results 1 - 8 Sort by: **Best Results**

1 2 3 4 5

Compare Selected Products	Compare Selected Products	Compare Selected Products	Compare Selected Products
<p>Nikon Nikon D7100 24.1 MP Digital SLR Camera with AF-S DX 18-140mm VR lens</p> <div style="text-align: center;">  <p>No image available at this time</p> </div> <p style="text-align: center;">Customer Rating ★★★★☆ 4.7 out of 5</p> <p>Price \$1,699.95 Instant Savings -\$300.00 Subtotal \$1,399.95</p> <p style="text-align: center; background-color: #4CAF50; color: white; padding: 5px; border-radius: 5px;">Customize It</p>	<p>Canon Canon EOS 70D 20.2 MP Digital SLR Camera with EF-S 18-55mm IS STM lens</p> <div style="text-align: center;">  </div> <p style="text-align: center;">Customer Rating ★★★★☆ 4.4 out of 5</p> <p>Price \$1,349.00 Instant Savings -\$200.00 Subtotal \$1,149.00</p> <p style="text-align: center; background-color: #4CAF50; color: white; padding: 5px; border-radius: 5px;">Customize It</p>	<p>Canon Canon EOS Rebel T5i 18 MP Digital SLR Camera with EF-S 18-55mm IS STM lens</p> <div style="text-align: center;">  </div> <p style="text-align: center;">Customer Rating ★★★★☆ 4.7 out of 5</p> <p>Price \$849.99 Instant Savings -\$100.00 Subtotal \$749.99</p> <p style="text-align: center; background-color: #4CAF50; color: white; padding: 5px; border-radius: 5px;">Customize It</p>	<p>Canon Canon EOS Rebel T3 12.2 MP Digital SLR Camera with 18-55 mm IS Lens, Case Logic Bag and Kingston Elite 8 GB Flash memory card</p> <div style="text-align: center;">  </div> <p style="text-align: center;">Customer Rating ★★★★☆ 4.7 out of 5</p> <p>Price \$499.99 Instant Savings -\$100.00 Subtotal \$399.99</p> <p style="text-align: center; background-color: #4CAF50; color: white; padding: 5px; border-radius: 5px;">Customize It</p>
<p>Canon Canon EOS Rebel SL1 18.0 MP Digital SLR Camera with EF-S 18-55mm IS STM lens</p>	<p>Nikon Nikon D3100 14 MP Digital SLR Camera with AF-S DX Zoom-Nikkor 18-55 mm f/3.5-5.6G ED II Lens and AF-S DX 70mm - Nikkor 55-200 mm</p>	<p>Nikon Nikon D5200 24.1 MP Digital SLR Camera with 18 - 55 mm Zoom Lens and Wu-1a Wireless Mobile Adapter - Black</p>	<p>Nikon Nikon D3200 24.2 MP Digital SLR Camera with 18-55 mm Zoom Lens</p>

Conjoint Analysis (CJA)



CJA is a collection of tools

- Full Profile
 - Choice Based (CBC)
 - Adaptive Choice
 - Self-Explicated
 - Max-Diff
-

Growing use in Health Arena

- Patients' HIV treatment medication preferences measured by CJA successfully predicted their actual medication choices
 - Patients' preferences for healthcare system reforms in Hungary
 - Willingness to pay and preference for the features of raltitrexed versus standard therapy in advanced colorectal cancer
-

CJA: 4 Main steps

1. Choose product attributes
 2. Choose attribute values
 3. Create the scenarios
 4. Run the experiment / compute attribute utility
-

Ice Cream Conjoint
sample card



black raspberry
chocolate
strawberry
vanilla

cone
cup

100%
Fresh

\$1.50
\$2.00
\$2.50
\$3.00

Low
Fat



\$3
6 hours

\$3
12 hours

\$5
6 hours

\$5
12 hours





Attribute	Value 1	Value 2	Justification for Attribute Values
1. Cost per application	USD 0.30	USD 5.00	Value 1: Approximate cost of a male condom in Peru and Ecuador. Lower overall cost. Value 2: Approximate cost of the contraceptive pill per month in Peru and Ecuador; chosen as an example of a sexual health related product that must be used every day. Higher overall cost.
2. Formulation	Gel	Liquid	Value 1: Lubricant use is common among Peruvian MSM during receptive anal intercourse. Value 2: Douching is common among US MSM prior to receptive anal intercourse and potentially in Peruvian MSM ^c but may be less practical than a gel.
3. Prescription	Available over the counter, without a prescription	By prescription only	Value 1: Would not require engagement with the medical system and may provide more anonymity with regard to product access. Value 2: Would require consumers to engage with the medical system in order to receive a prescription; would necessarily require that the physician know about the consumer's sexual behaviours.
4. Frequency of use	Just before sexual intercourse	Daily use regardless of sexual activity	Value 1: The lowest frequency of use that would presumably provide protection. Value 2: ARV-based RM may require daily application regardless of sexual behaviour in order to confer sufficient levels of drug in the rectal mucosa to prevent HIV infection.
5. Effectiveness	80%	40%	Value 1: Considered the highest likely clinical efficacy that a RM may have based on expert opinion. Value 2: Considered the lowest likely clinical efficacy a RM could have and still be considered for actual use based on expert opinion.
6. Side effects	none	some (itching, burning, bloating)	Value 1: The ideal RM would have no side effects. Value 2: Side effects, if present, would need to be minimal.
7. Dosage / volume	15 ml (1 tablespoon)	35 ml (about 2 ½ tablespoons)	Value 1: Considered the lowest probable product volume that would be needed to confer protection. Value 2: Highest tolerable volume of gel that was found acceptable in a rectal volume escalation study in MSM.

Experimental Design for Conjoint Analysis: Hypothetical Rectal microbicides

Hypothetical Microbicides	Effective-ness	Prescription requirement	Side Effects	Frequency of Use	Product Formu-lation	Dose/ Volume (ml)	Cost USD
1	40%	Sold OTC	none	every day	gel	35	\$0.30
2	80%	Sold OTC	none	every day	liquid	15	\$5.00
3	40%	Rx needed	some	every day	gel	15	\$5.00
4	80%	Rx needed	some	every day	liquid	35	\$ 0.30
5	40%	Rx needed	none	before sex	liquid	35	\$5.00
6	80%	Rx needed	none	before sex	gel	15	\$ 0.30
7	40%	Sold OTC	some	before sex	liquid	15	\$ 0.30
8	80%	Sold OTC	some	before sex	gel	35	\$5.00



Impact scores for RM attributes

RM attributes	Attribute Values: 1 and 2	Attribute Value 1 Impact (mean)				Attribute Value 2 Impact (mean)				Overall Attribute Impact on RM acceptability [(Value 1) – (Value 2)] (mean)			
		ALL	LIM	IQT	GYE	ALL	LIM	IQT	GYE	ALL	LIM	IQT	GYE
Effectiveness (%)	80 vs. 40	65.79	61.88	64.72	70.51	36.75	31.88	40.42	37.89	29.04‡	30.00‡	24.30‡	32.62‡
Side Effects	none vs. some	57.93	51.46	54.03	67.77	44.70	42.29	51.46	40.63	13.23‡	9.17†	2.57	27.14‡
Frequency	before sex vs. daily	56.92	53.33	59.88	57.42	45.4	40.32	44.79	50.98	11.49‡	13.00*	15.09‡	6.44*
Formulation	gel vs. liquid	54.21	52.71	52.71	57.03	48.1	41.04	51.61	51.37	6.09†	11.67†	1.10	5.66
Cost (USD)	0.30 vs. 5.00	53.26	49.00	56.45	54.29	49.3	45.58	48.75	54.10	4.01*	3.42	7.70*	0.19
Rx needed	OTC vs. Rx	48.32	47.29	43.75	53.71	54.3	46.46	61.67	54.69	-5.96*	0.83	-17.92‡	-0.98
Dosage (ml)	15 vs. 35	51.01	48.59	48.54	55.66	51.6	45.00	56.65	52.73	-0.54	3.59	-8.11*	2.93

RM, Rectal Microbicide; Rx, Prescription needed; OTC, Over the Counter; ALL, all three cities; LIM, Lima; IQT, Iquitos; GYE, Guayaquil.

*p < 0.05, †p < 0.01, ‡p < 0.001 for the one sample *t*-tests.

RM attributes	Attribute values Value 1, Value 2	Overall Attribute Impact on RM acceptability [(Value 1) – (Value 2)] (mean)			
		ALL	LIM	IQT	GYE
Effectiveness (%)	80 vs. 40	29.04 [‡]	30.00 [‡]	24.30 [‡]	32.62 [‡]
Side Effects	none vs. some	13.23 [‡]	9.17 [†]	2.57	27.14 [‡]
Frequency	before sex vs. daily	11.49 [‡]	13.00 [*]	15.09 [‡]	6.44 [*]
Formulation	gel vs. liquid	6.09 [†]	11.67 [†]	1.10	5.66
Cost (USD)	0.30 vs. 5.00	4.01 [*]	3.42	7.70 [*]	0.19
Rx needed	OTC vs. Rx	-5.96 [*]	0.83	-17.92 [‡]	-0.98
Dosage (ml)	15 vs. 35	-0.54	3.59	-8.11 [*]	2.93

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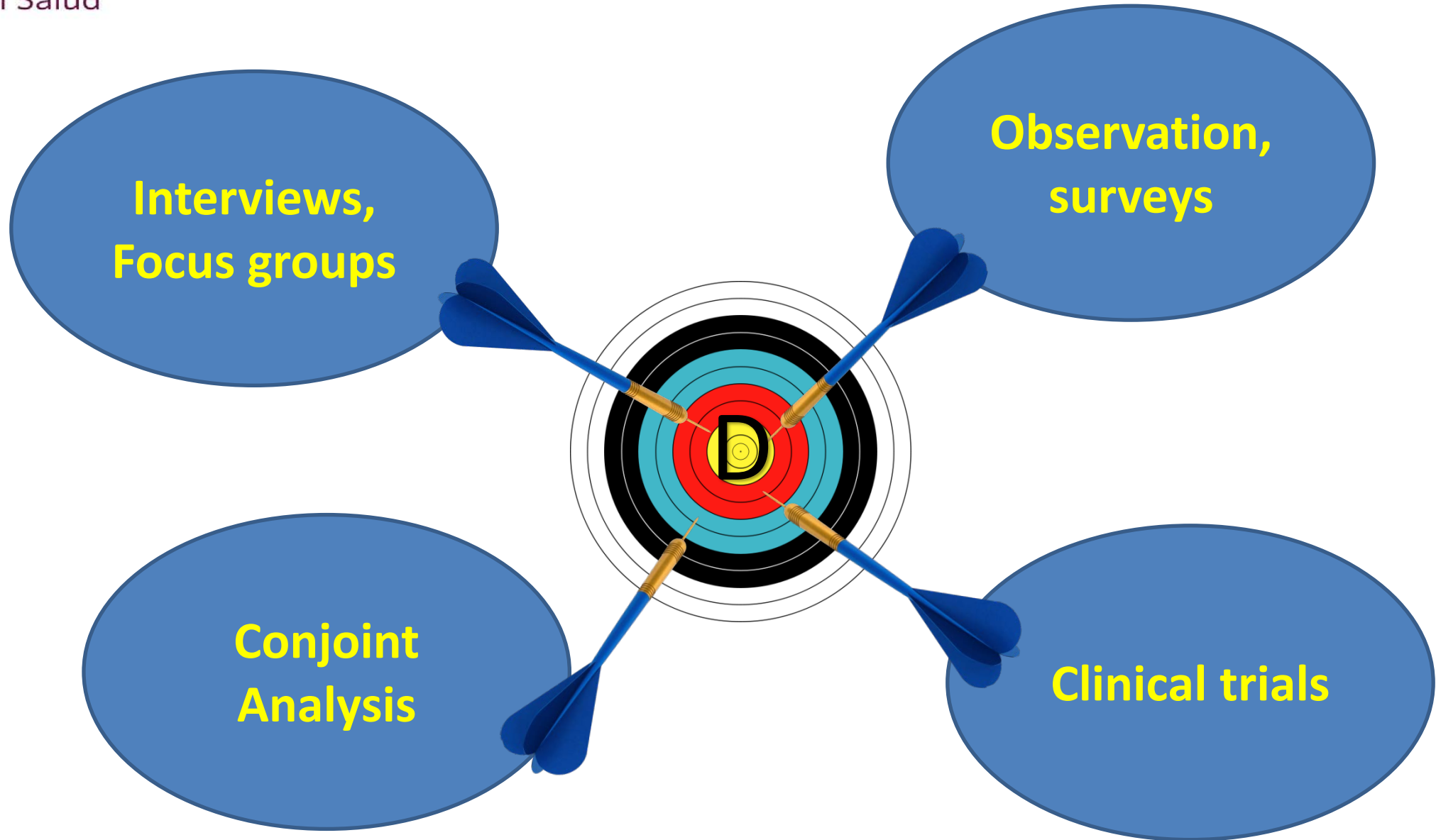
*p < 0.05, †p < 0.01, ‡p < 0.001 for the one sample *t*-tests.

USA - Pet



Peru - Dinner





Role of conjoint analysis in microbicide development



de·sire

də'zī(ə)r

noun

1. a strong feeling of wanting to have something or wishing for something to happen.

"a desire to work in the dirt with your bare hands"

synonyms: wish, want, aspiration, fancy, inclination, impulse

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