Washing Away Postdecisional Dissonance: A Mini Meta-Analysis

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Five experiments conducted by four different labs have explored the effect of physical cleansing on postdecisional dissonance. Interested in what these findings suggest overall, we meta-analyzed them, which included both published and unpublished data. We used two methods. Method 1 included all effects. Method 2 compared effects expected to show significant vs. non-significant patterns of washing away postdecisional dissonance. All results are summarized below.

References for experiments, in chronological order
- Lee, S. W. S., & Schwarz, N. (2010). Washing away postdecisional dissonance. *Science, 328*(5979), 709. doi:10.1126/science.1186799
- De Los Reyes, A., Aldao, A., Kundey, S. M. A., Lee, B. G., & Molina, S. (2012). Compromised decision making and the effects of manipulating physical states on human judgments. *Journal of Clinical Psychology, 68*(1), 1–7. doi:10.1002/jclp.20851
- Marotta, M., & Bohner, G. (2013). *Dissonanz abwaschen, dissonanz reinreiben: Symbolische abschwächung vs. verstärkung von dissonanz nach entscheidungen*. Poster presentation at the Tagung der Fachgruppe Sozialpsychologie, Hagen, Germany.
- Buttrick, N., Gampa, A., Hummer, L., & Nosek, B. (2017). *Replication of washing away postdecisional dissonance*. Manuscript under review.

Method 1: Including All Effects from Experiments on Washing Away Postdecisional Dissonance

Study name	Subgroup within study	Comparison	Outcome	Statistics						
				Std diff in means	Standard error	Variance	Lower limit	Upper limit	Z-value	p-value
Lee & Schwarz, 2010, Study 1	N/A	Used vs. examined liquid soap for product evaluation	Change in rank difference of chosen over rejected CD from pre- to post-decision	0.795	0.329	0.108	0.151	1.440	2.419	0.016
Lee & Schwarz, 2010, Study 2	N/A	Used vs. examined & antiseptic wipe for product evaluation	Difference in expected taste of chosen over rejected jam	0.587	0.222	0.049	0.153	1.021	2.650	0.008
De Los Reyes et al., 2012	Scored high on intolerance of uncertainty, ruminative responses, & generalized anxiety	Used vs. examined & antiseptic wipe for product evaluation	Difference in evaluation of chosen & rejected pens	-0.442	0.492	0.242	-1.405	0.522	-0.898	0.369
De Los Reyes et al., 2012	Scored low on intolerance of uncertainty, ruminative responses, & generalized anxiety	Used vs. examined antiseptic wipe for product evaluation	Difference in evaluation of chosen & rejected pens	1.059	0.385	0.148	0.305	1.814	2.751	0.006
Marotta & Bohner, 2013	N/A	Linear trend: Used cleaning cloth vs. examined cleaning cloth vs. used sticky chocolate rub	Change in rating difference of chosen over rejected jam from pre- to post-decision	0.355	0.184	0.034	-0.007	0.716	1.924	0.054
Buttrick, Gampa, Hummer, & Nosek, 2017	N/A	Used vs. examined liquid soap for product evaluation	Change in rank difference of chosen over rejected CD from pre- to post-decision	-0.086	0.118	0.014	-0.318	0.146	-0.731	0.465
Overall effect, fixed-effects model[1]				0.204	0.084	0.007	0.040	0.369	2.431	0.015
Overall effect, random-effects model				0.375	0.196	0.039	-0.010	0.760	1.908	0.056

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[1] $Q(5) = 19.571$, $p = .002$, $I^2 = 74.452$. $T = 0.391$, $T^2 = 0.153$, standard error = 0.152, variance = 0.023

Studies/subgroups within study	Standard difference in means and 95% CI

Lee & Schwarz, 2010, Study 1

Lee & Schwarz, 2010, Study 2
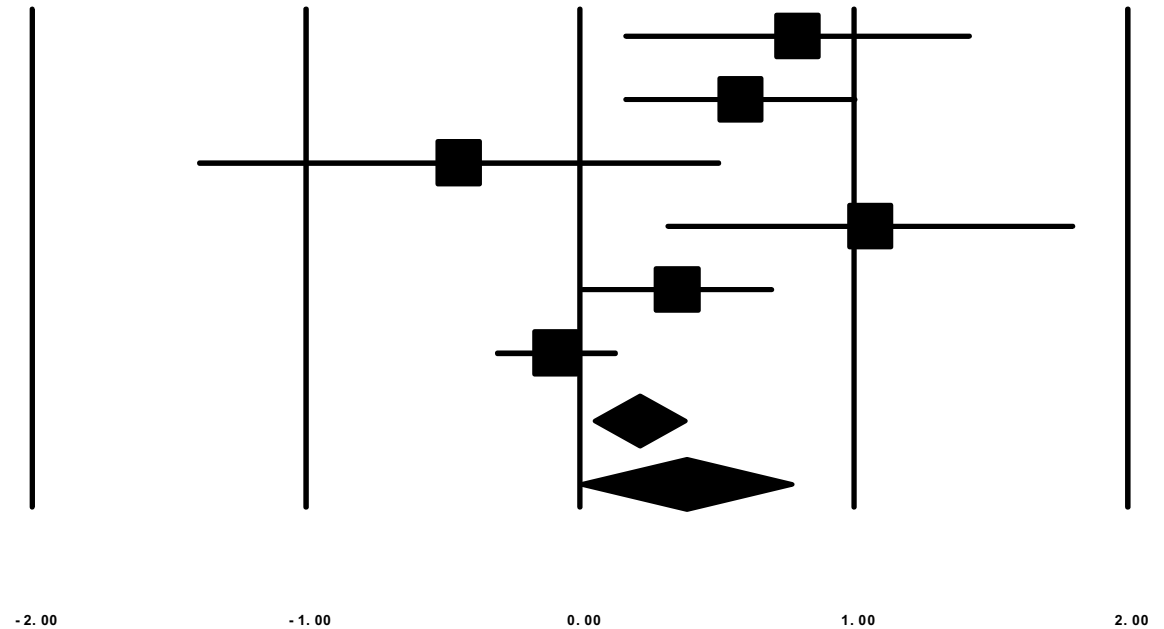
De Los Reyes et al., 2012, high on ind. diff.

De Los Reyes et al., 2012, low on ind. diff.

Marotta & Bohner, 2013

Buttrick, Gampa, Hummer, & Nosek, 2017

OVERALL EFFECT, FIXED-EFFECTS MODEL

OVERALL EFFECT, RANDOM-EFFECTS MODEL

- 2. 00   - 1. 00   0. 00   1. 00   2. 00

Method 2: Comparing Effects Expected to Show Significant vs. Non-Significant Patterns of Washing Away Postdecisional Dissonance

Was this effect expected to be significant?	Study name	Subgroup within study	Comparison	Outcome	Statistics						
					Std diff in means	Standard error	Variance	Lower limit	Upper limit	*Z*-value	*p*-value
Yes	Lee & Schwarz, 2010, Study 1	N/A	Used vs. examined liquid soap for product evaluation	Change in rank difference of chosen over rejected CD from pre- to post-decision	0.795	0.329	0.108	0.151	1.440	2.419	0.016
Yes	Lee & Schwarz, 2010, Study 2	N/A	Used vs. examined & antiseptic wipe for product evaluation	Difference in expected taste of chosen over rejected jam	0.587	0.222	0.049	0.153	1.021	2.650	0.008
Yes	De Los Reyes et al., 2012	Scored low on intolerance of uncertainty, ruminative responses, & generalized anxiety	Used vs. examined antiseptic wipe for product evaluation	Difference in evaluation of chosen & rejected pens	1.059	0.385	0.148	0.305	1.814	2.751	0.006
Yes	Marotta & Bohner, 2013	N/A	Linear trend: Used cleaning cloth vs. examined cleaning cloth vs. used sticky chocolate rub	Change in rating difference of chosen over rejected jam from pre- to post-decision	0.355	0.184	0.034	-0.007	0.716	1.924	0.054
Yes	Buttrick, Gampa, Hummer, & Nosek, 2017	N/A	Used vs. examined liquid soap for product evaluation	Change in rank difference of chosen over rejected CD from pre- to post-decision	-0.086	0.118	0.014	-0.318	0.146	-0.731	0.465
Yes	Overall effect within this category, fixed-effects model[2]				0.224	0.085	0.007	0.057	0.391	2.623	0.009
Yes	Overall effect within this category, random-effects model				0.463	0.207	0.043	0.058	0.869	2.238	0.025
No	De Los Reyes et al., 2012	Scored high on intolerance of uncertainty, ruminative responses, & generalized anxiety	Used vs. examined & antiseptic wipe for product evaluation	Difference in evaluation of chosen & rejected pens	-0.442	0.492	0.242	-1.405	0.522	-0.898	0.369
No	Overall effect within this category				-0.442	0.492	0.242	-1.405	0.522	-0.898	0.369

[2] $Q(4)$ = 17.794, p = .001, I^2 = 77.520. T = 0.392, T^2 = 0.154, standard error = 0.159, variance = 0.025.

Categories and studies

Was this effect expected to be significant? No
De Los Reyes et al., 2012, high on ind. diff.

Overall effect within category, fixed-effects model

Overall effect within category, random-effects model

Was this effect expected to be significant? Yes
Lee & Schwarz, 2010, Study 1

Lee & Schwarz, 2010, Study 2

De Los Reyes et al., 2012, low on ind. diff.

Marotta & Bohner, 2013

Buttrick, Gampa, Hummer, & Nosek, 2017

OVERALL EFFECT WITHIN THIS CATEGORY, FIXED-EFFECTS MODEL
OVERALL EFFECT WITHIN THIS CATEGORY, RANDOM-EFFECTS MODEL

-2.00   -1.00   0.00   1.00   2.00