

# The Scientific contagion Effect: Judgements about acceptability of Water for religious use reduces after scientific treatment

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## Introduction



People use and drink water at many religious sites.

We need to resolve Potential public health risk

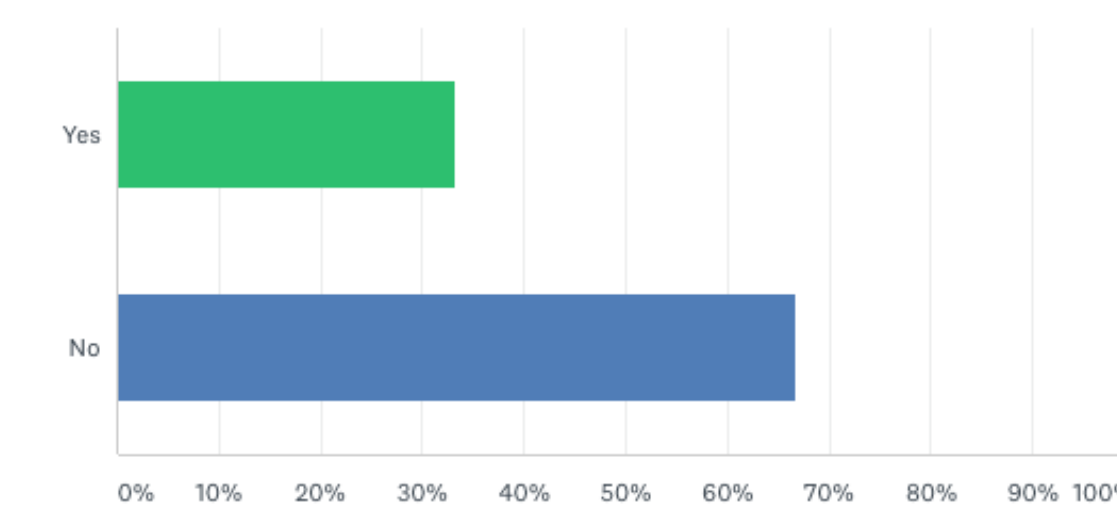
## Study 1

- Cover story: Ancient natural reservoir (*kund*) with a religious narrative, Government officials planning to treat the water for reducing health hazards.
- DV: Would acceptability of water be reduced after local officials treat the water scientifically (group 1, n=45, all Hindus) versus using religious rituals (*puja*) (group 2, n=45, all Hindus).

### RESULTS

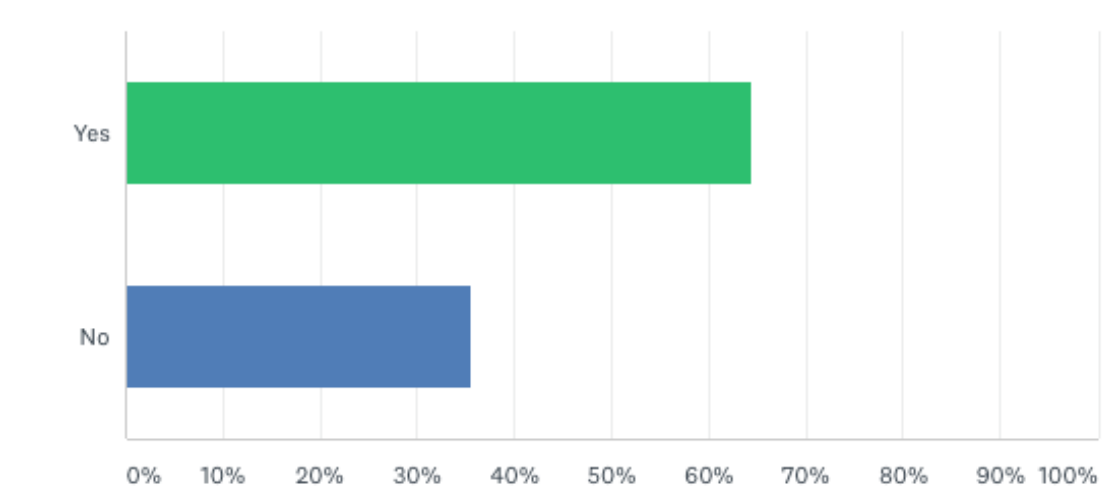
Do you think that such scientific treatment would reduce the acceptability of this water for drinking?

Answered: 45 Skipped: 0



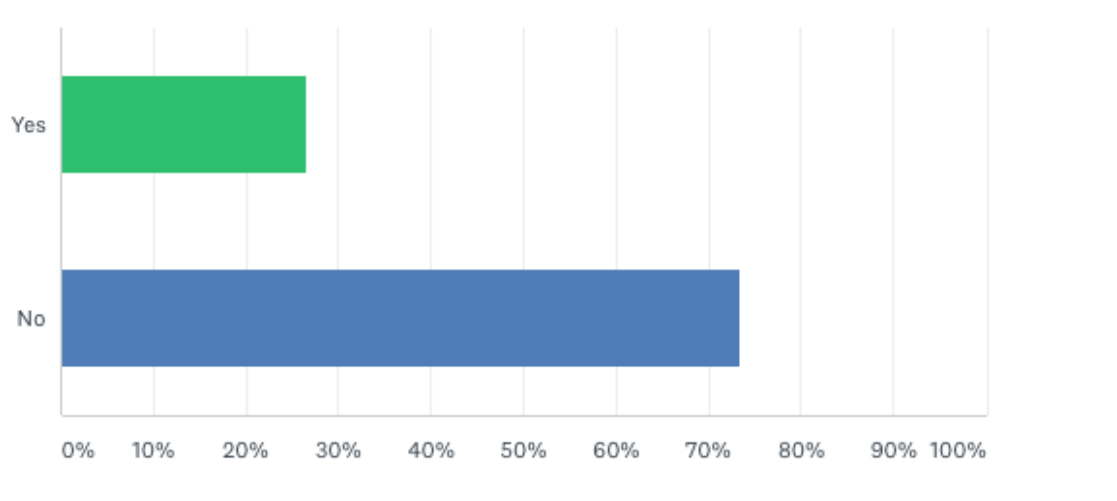
Do you think that such scientific treatment would reduce the acceptability of this water for religious purposes?

Answered: 45 Skipped: 0



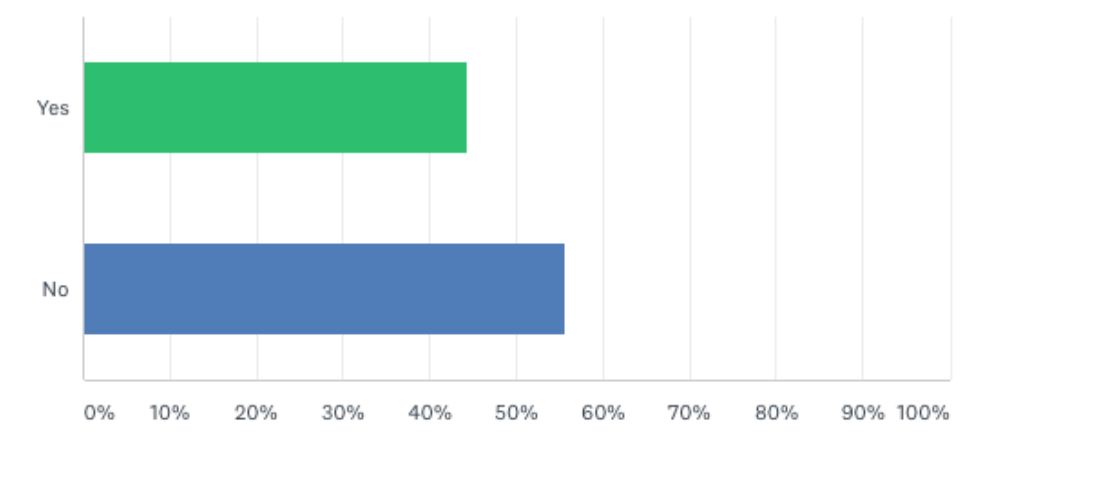
Do you think that such worshipping would reduce the acceptability of this water for religious purposes?

Answered: 45 Skipped: 0



Do you think that such worshipping would reduce the acceptability of this water for drinking?

Answered: 45 Skipped: 0



## Study 2

- n= 203
- Subtle manipulation of the religious narrative (2:less or more religious significance) and treatment (2:add-then-subtract minerals vs subtract-then-add minerals) that kept the substance [water] actually unaltered (e.g., Rozin, 2006) between four groups.

### Manipulation of treatment keeping substance constant

For the water from the natural spring mentioned in the last page, a scientific process is done ...where the 0.1% minerals contained in the water are removed and then added back. The scientific process does not change the chemical composition of the water.

OR

where 0.1% natural minerals are added and then removed.. The scientific process does not change the chemical composition of the water.

### DV:

- How acceptable is this water for drinking? Rate on a scale from 0 to 100
- How acceptable is this water for religious rituals/activities? Rate on a scale from 0 to 100
- What is the maximum price you might be willing to pay for five litres (5000 ml) of this water within the range of 0 Rs to 300 Rs. ?

### RESULTS

- No significant effect of narrative manipulations or order of treating the water and no interaction in any DV(p>.2).
- Collapsing all the four groups, Difference score calculated using pre-post treating the water on acceptability ratings for drinking use, religious use and Willingness to pay. (positive value means reduction after scientific treatment)

Pre-post Difference	Drinking Acceptability	Religious Acceptability	WTP
Mean	-2.21	16.06	8.94
SD	24.00	29.90	57.90
T-test	1.31	7.65	2.20
P-value	0.19	<.001	0.02

## Sum up

- Acceptability for religious use reduced significantly more compared to its use for drinking after scientific treatment both when the water could be altered (study 1) and when it was chemically unaltered (study 2).
- ‘Scientific contagion’ can have social implications when government initiatives for treating water in religious areas are brought in place for improving public health.

## The Big Water and Health issue linked to religion

But, Can a substance processed through scientific methods reduce its religious acceptability?



## Hypothesis to test

- Whether scientific treatment of water results in a contagion effect that reduce religious acceptability of the water (‘scientific contagion’), both when the substance is altered and unaltered? .
- Two studies tested judgments about acceptability of water for religious use in comparison to drinking use after scientific treatments in order to reduce health hazards.

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