

Understanding latrine use in rural India using the risks, attitudes, norms, abilities and self-regulation (RANAS) approach

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1. 100 Million latrines constructed in India. But, are they being used?

- Open defecation causes stunting in children below 5 years.
- Safe sanitation improves child health.
- Intensive latrine construction by the Indian government.
- Many latrines remain unused.



2. Research Gaps

- The behavioral factors steering latrine use have not been investigated using an established psychological model.
- Existing behavior change campaigns to promote latrine use have not been designed using such a model.

3. Aims of this study

1. Identify the most relevant behavioral factors of latrine use using the risks, attitudes, norms, abilities, and self-regulation (RANAS) model.
2. Compare results from qualitative and quantitative methods.
3. Derive interventions for the target population to promote latrine use.

5. Method

QUALITATIVE

- Qualitative in-depth interviews (N=25) with randomly selected villagers from Karnataka State.
- Thematic coding with behavioral factors as categories.
- Comparison of responses between latrine users and non-users.

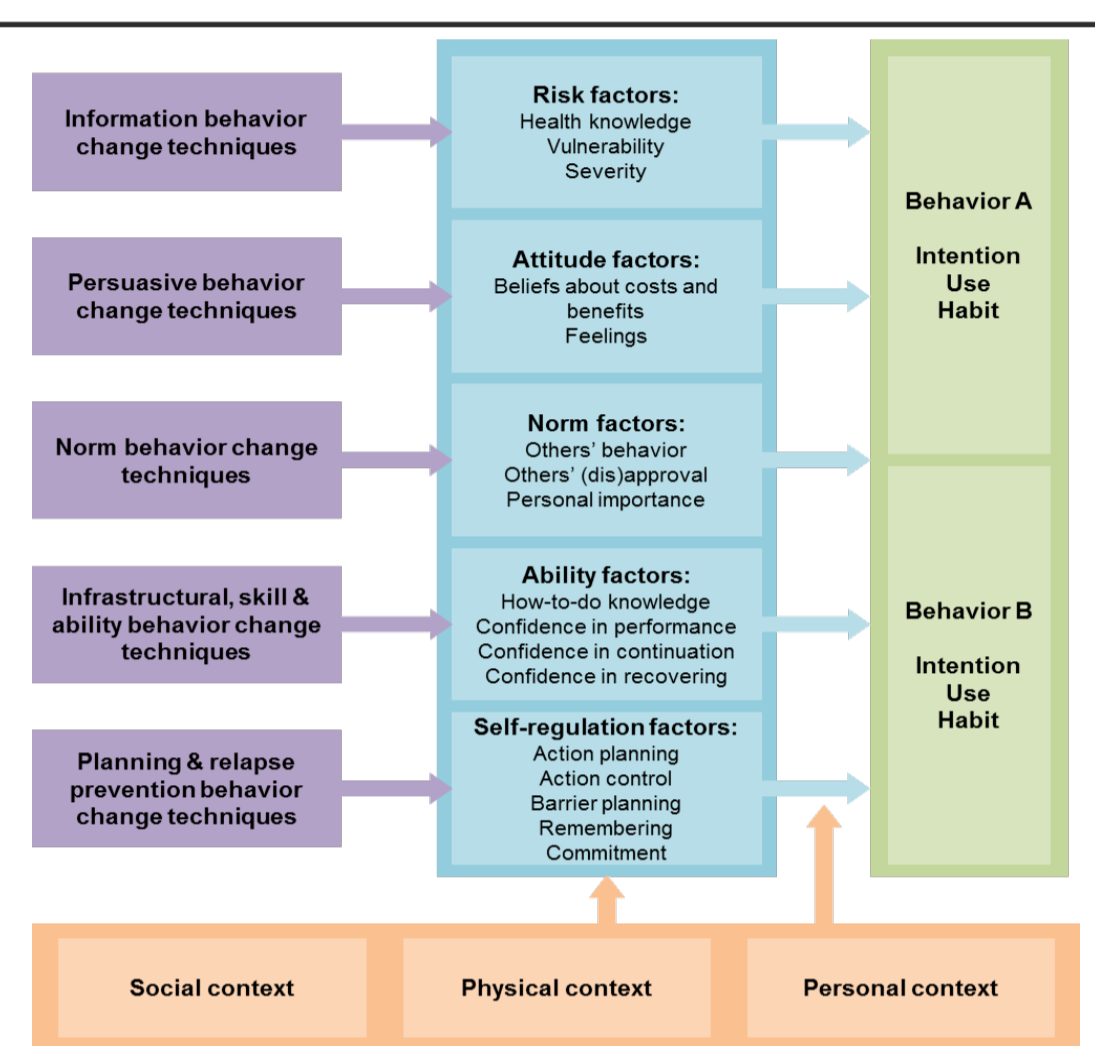


QUANTITATIVE

- Quantitative, structured face-to-face interviews (N=2328) with randomly selected respondents from 120 villages in Karnataka.
- Linear regression of behavioral factors on latrine use.
- Comparison of regression weights.

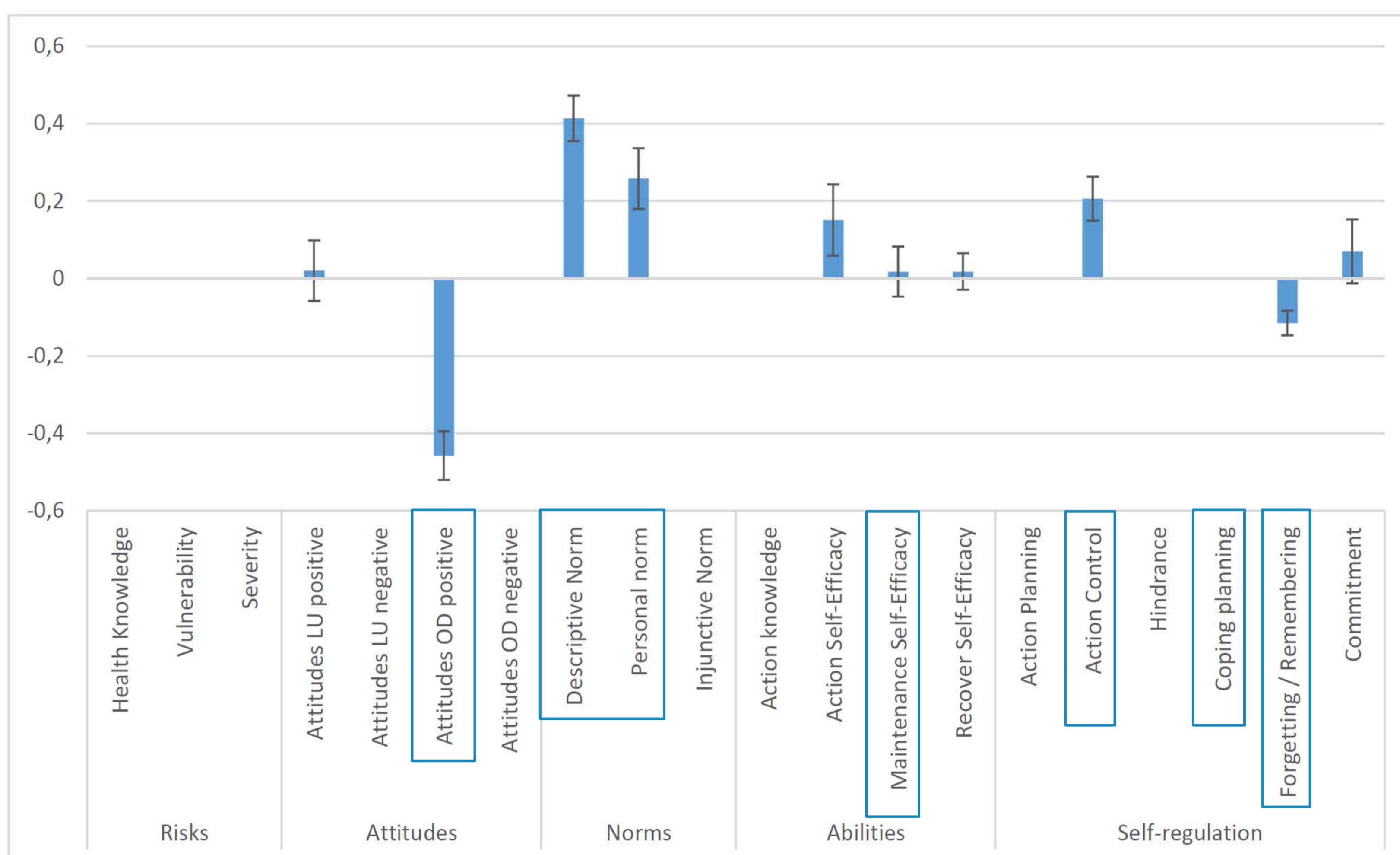
4. RANAS model

The risks, attitudes, norms, abilities, and self-regulation (RANAS) model is a conceptual framework to explain change in hygiene and sanitation behaviour and a guideline to design and evaluate behaviour change campaigns.



6. Results & Discussion

▼ Regression weights (95% CI) of behavioral factors on latrine use. N = 1891; R² = .74 ▼



▲ Blue boxes indicate relevant behavioral factors as revealed in qualitative study ▲

Quantitative vs. Qualitative findings

- Findings were mostly congruent
- Exceptions: Action knowledge, Coping Planning and Maintenance self-efficacy only relevant in qualitative study results.
- Action self-efficacy only relevant in quantitative study.

Implications for intervention design

The following interventions are derived and currently evaluated:



Left: Targeting attitudes through discussion of benefits of latrine use and costs of open defecation (BCT 5 Inform about and assess costs and benefits). Right: Increasing descriptive norms through public photo commitments (BCT 10 Prompt public commitment).



Left: Targeting action planning/control through daily routine planning (BCT 26 Prompt specific planning). Right: Coping with forgetting through reminder stickers on anal cleansing mugs (BCT 34 Use memory aids and environmental prompts).

7. Conclusions

- The RANAS model explained large proportion of variance in latrine use.
- Qualitative and quantitative findings were mostly congruent.
- Theory-based identification of behavioral factors in the specific target population allows to develop a targeted intervention.