

# Psychosocial determinants of handwashing: quantitative evidence from a multi-country study using the RANAS model of behavior change

## 1. Objectives:

- To reveal which determinants commonly explain handwashing with soap
- To demonstrate how well psychosocial factors of the RANAS model can explain handwashing
- To identify population-specific determinants to be targeted in different contexts



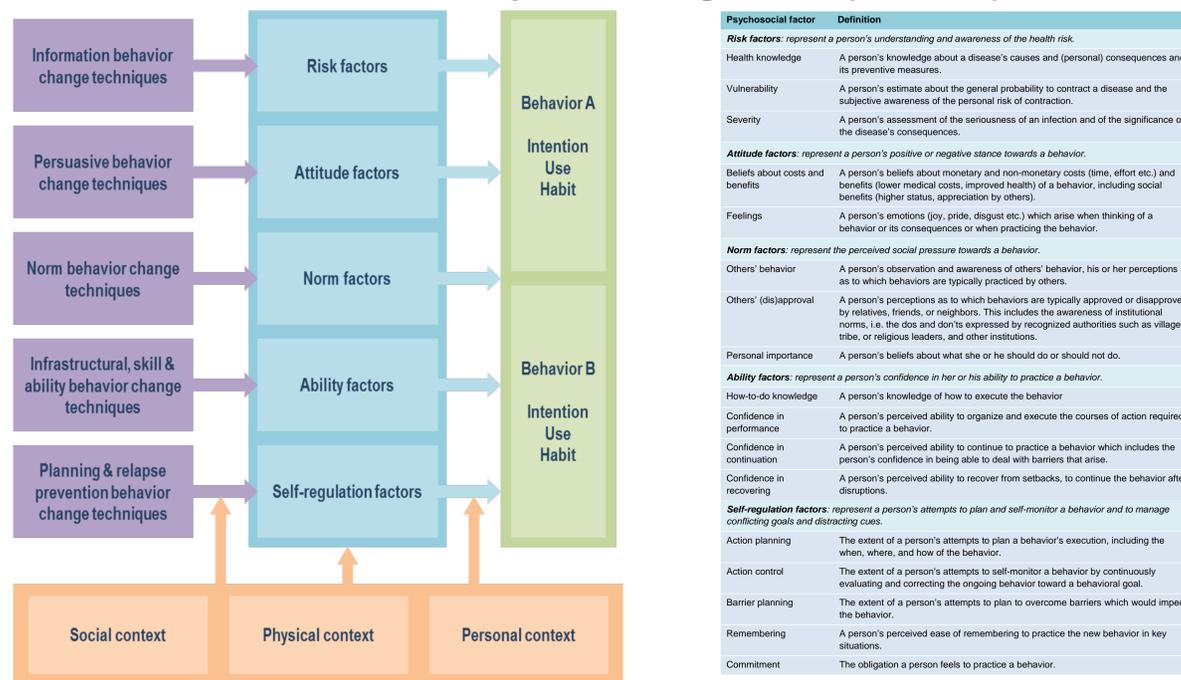
## 2. Method

- The study collates data from more than 5000 households
- Countries: Burundi, Haiti, Ethiopia, Chad, The Gambia, Guinea Bissau, Senegal, Zimbabwe
- Questionnaires with predefined questions were used in face-to-face interviews to measure the psychosocial factors of the Risks, Attitudes, Norms, Abilities, and Self-regulation (RANAS) model.
- These psychosocial factors were correlated with handwashing with soap by regression analysis.

### Statistical analysis

- To define how well the difference between high-frequency handwashers and low-frequency handwashers can be explained (explained variance).
- It shows the relative degree of influence a factor exerts on handwashing

## 3. Risk, Attitude, Norms, Ability & Self-Regulation (RANAS-) Model



## 4. Results

Factor blocks	Behavioral factor	Haiti	Ethiopia	Senegal	The Gambia	Burundi GIZ	Burundi SDC	Chad	Zimbabwe	Guinea-Bissau	Relevance in percentage of cases
Risk factors	Health knowledge	0	0	+	0	0	0	+	0	+	33% (3/9)
	Vulnerability	0	0	0	0	0	0	0	0	0	0% (0/9)
	Severity	+	+	0	0	-	-	+	0	0	55% (5/9)
Attitude factors	Beliefs about costs and benefits	0	0	+	+	+	+	-	0	0	55% (5/9)
	Feelings	+	+	0	+	+	+	+	0	+	77% (7/9)
	Others' behavior	+	+	+	+	+	+	0	+	+	88% (8/9)
Norm factors	Others' (dis)approval	+	+	+	+	-	-	0	0	0	62% (5/8)
	Personal importance	0	0	0	+	0	0	+	0	0	28% (2/7)
	How-to-do knowledge	0	0	+	0	0	0	0	+	0	28% (2/7)
Ability factors	Confidence in performance	+	0	+	0	+	+	+	0	0	55% (5/9)
	Confidence in continuation	0	0	0	0	0	0	+	+	0	25% (2/8)
	Confidence in recovering	0	0	+	0	0	0	0	0	0	12% (1/8)
Self-regulation factors	Action planning	0	0	+	0	+	+	0	0	0	37% (3/8)
	Action control	0	0	0	0	0	0	0	+	0	14% (1/7)
	Barrier planning	+	0	0	0	0	0	0	0	0	14% (1/7)
Sign. add. Factors	Remembering	+	0	0	0	-	+	+	+	0	55% (5/9)
	Commitment	0	+	0	0	0	+	0	0	+	44% (4/9)
N		746	365	275	422	761	660	858	600	366	5053
Adj R		.53	.50	.51	.49	.45	.54	.55	0.42	.24	.47

+ = positive correlation; - = negative correlation; 0 = no correlation; blank = not tested



- Handwashing with soap can be explained very well using the RANAS model (47% explained variance).
- The behavioral factors that most commonly influence handwashing: Others' behavior, Others' approval, and Feelings.

➔ In most cases the observation of handwashing by relatives, friends, and neighbors is a strong motivator for an individual's handwashing.

➔ The affirmation by relevant others that they support and approve of handwashing is also a driver.

➔ Feelings associated with handwashing, such as liking and pleasantness or disgust were a main driver of handwashing.

- Influential in half of the cases: Severity, Beliefs about costs and benefits, Remembering, and Confidence in performance
- Influential in a third of the cases: Health knowledge, Action planning, and Commitment

## 5. Conclusions

- Promotion activities should mostly target feelings and social norms relating to handwashing.
- Other factors, like Severity, Beliefs about costs and benefits, Remembering, and Confidence in performance are also relevant in specific socio-cultural contexts.
- To design population tailored interventions, all the factors of the RANAS Model should be tested for their significance for handwashing in each socio-cultural context.

## 6. References

Mosler, H.-J. (2012). A systematic approach to behavior change interventions for the water and sanitation sector in developing countries: a conceptual model, a review, and a guideline. International journal of environmental health research, 22, 431-449.