Supplementary material

Table S1 | Reported associations between socio-psychological determinants and different target behaviors for all included studies

Studies included in the review are grouped according to safe water option; depicting authors, psychological health theory used, target behavior and country of study. Results were coded as “+” for significant associations and “−” for non-significant associations; “n.a.” means that this information is not available for individual factors. The $R^2$ value from statistical regression analysis is given as the coefficient of determination for each summary model wherever this was reported.

TPB = Theory of Planned Behavior (Fishbein & Ajzen 2010); HBM = Health Belief Model (Rosenstock 1974); PMT = Protection Motivation Theory (Floyd et al. 2000); HAPA = Health Action Process Approach (Schwarzer 2008); TDI = Theory of Diffusion of Innovations (Rogers 2010); RANAS = Risk, Attitude, Norm, Ability, Self-Efficacy Model (Mosler 2012).

+ The factors for vulnerability and severity were combined as a general risk factor. ++ Exemplary items can be found in the supplementary material at http://www.eawag.ch/fileadmin/Domain1/Abteilungen/ess/Working_papers/Working_paper_2015-01_Lilje_homepage.pdf.
Table S2 | Operationalization of psychological constructs

Where available, an exemplary item from each study is given for an understanding of how the factors were operationalized. Where this information was not accessible, the closest definition or description of the factor is displayed. Empty fields mean that this factor was not operationalized in the respective study.

Some factors in some studies have been assessed, but were then not reported in the regression models. This means that some of the cells with a given operationalization in Table S2 can be without a result (n.a.) in Table S1.

<table>
<thead>
<tr>
<th>Authors</th>
<th>Theory applied</th>
<th>Target behavior; (Country)</th>
<th>Vulnerability</th>
<th>Severity</th>
<th>Health Knowledge</th>
<th>Instrumental beliefs</th>
<th>Affective beliefs</th>
<th>Descriptive norm</th>
<th>Injunctive norm</th>
<th>Action knowledge</th>
<th>Goal self-efficacy (S.-E.)</th>
<th>Maintenance S.-E.</th>
<th>Recovery S.-E.</th>
<th>Action planning</th>
<th>Coping planning</th>
<th>Remembering/forgetting</th>
<th>Commitment</th>
<th>N</th>
<th>R²</th>
<th>Reference</th>
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</thead>
<tbody>
<tr>
<td>Alther et al. (2008)</td>
<td>TPB</td>
<td>SODIS usage; (Nicaragua)</td>
<td>n.a.</td>
<td>n.a.</td>
<td>o</td>
<td>o</td>
<td>+</td>
<td>o</td>
<td>o</td>
<td>n.a.</td>
<td>+</td>
<td>o</td>
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<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
<td>log table 2: .863</td>
<td>page 9</td>
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<tr>
<td>Graf et al. (2008)</td>
<td>HBM; TPB</td>
<td>SODIS usage; (Kenya)</td>
<td>o</td>
<td>o</td>
<td>+</td>
<td>+</td>
<td>n.a.</td>
<td>+</td>
<td>n.a.</td>
<td>n.a.</td>
<td>+</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
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<td>page 351</td>
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<tr>
<td>Kraemer &amp; Mosler (2010)</td>
<td>TPB and others</td>
<td>SODIS usage; (Zimbabwe)</td>
<td>n.a.</td>
<td>n.a.</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>n.a.</td>
<td>o</td>
<td>n.a.</td>
<td>n.a.</td>
<td>+</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
<td>log table 5: .700</td>
<td>page 73</td>
<td></td>
</tr>
<tr>
<td>Heni &amp; Mosler (2008)*</td>
<td>TDI</td>
<td>SODIS usage; (Bolivia)</td>
<td>+</td>
<td>+</td>
<td>n.a.</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>o</td>
<td>n.a.</td>
<td>n.a.</td>
<td>+</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
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<td>n.a.</td>
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<tr>
<td>Tamas et al. (2013)</td>
<td>HBM; PMT; HAPA</td>
<td>SODIS water consumption; (Bolivia)</td>
<td>n.a.</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>+</td>
<td>o</td>
<td>+</td>
<td>n.a.</td>
<td>+</td>
<td>o</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
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<td>page 1400</td>
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<tr>
<td>Lith et al. (2015)**</td>
<td>RANAS</td>
<td>Chlorination of domestic drinking water; (Tchad)</td>
<td>o</td>
<td>+</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>+</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
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<tr>
<td>Huber et al. (2011)</td>
<td>RANAS</td>
<td>Consumption of fluoride free water from household filter; (Ethiopia)</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>+</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>n.a.</td>
<td>+</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
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<td>156</td>
<td>table 4: .679</td>
<td>page 274</td>
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</table>

8 studies 1/3/4 2/4/2 1/6/1 3/5/0 4/3/1 4/3/1 1/6/1 1/2/5 3/1/4 2/5/1 1/0/7 0/0/8 0/0/8 0/0/8 0/1/7 0/1/7 .607

| Huber & Mosler (2012) | RANAS | Consumption of fluoride free water from community filter; (Ethiopia) | o | o | + | + | + | + | o | o | n.a. | o | n.a. | o | n.a. | o | o | + | + | 203 | table 2: .568 | page 7 |
| Mosler et al. (2015) | PMT; TPB | Consumption of arsenic free deep tube well water; (Bangladesh) | o | o | o | o | + | + | o | n.a. | n.a. | + | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | 176 | table 4: .590 | page 1321 |
| Inauen et al. (2013) | RANAS | Use of arsenic-safe drinking water options; (Bangladesh) | + | o | o | o | o | o | o | o | + | o | n.a. | n.a. | + | n.a. | o | n.a. | + | o | 867 | log table 5: .888 | page 7 |
| Inauen & Mosler (2014) | RANAS | Use of arsenic free shallow tube well; (Bangladesh) | + | o | o | o | o | o | o | o | o | n.a. | o | o | o | n.a. | o | o | + | + | 363 | log table 2: .894 | page 8 |

4 studies 2/2/0 0/4/0 1/2/1 3/1/0 4/0/0 4/0/0 3/1/0 0/1/3 0/0/4 2/2/0 1/8/3 1/8/3 0/1/3 0/3/1 1/0/3 2/0/2 .685

| Stocker & Mosler (2015) | RANAS | Cleaning of water storage container; (Benin) | o | + | n.a. | + | o | + | o | n.a. | + | + | o | o | o | o | + | + | + | 905 | table 4: .425 | page 6 |

| Flanagan et al. (2015) | RANAS | Domestic well water testing for arsenic; (USA) | o | o | + | + | o | + | o | o | + | o | n.a. | o | n.a. | o | n.a. | o | 278 | log table 5: .415 | page 1280 |

Total 14 studies 3/7/4 3/9/2 3/8/3 8/6/0 9/4/1 10/3/1 4/3/1 4/1/9 4/1/9 8/5/1 2/0/12 1/1/12 0/3/11 0/4/10 2/2/10 3/2/9 .617
Alther et al. (2008)

- SODIS intention and usage: 
  - (No item given)
  - Participants were asked whether a young child of theirs had experienced diarrhea, if yes, how old the child was.
  - Participants were asked whether they had the knowledge that SODIS was a good technique to treat water, if yes, how old the child was.
  - Participants were asked whether they had the knowledge that SODIS was a good technique to treat water, if yes, how old the child was.

Gruf et al. (2006)

- SODIS usage: 
  - (No item given)
  - Participants were asked whether they had the knowledge that SODIS was a good technique to treat water, if yes, how old the child was.
  - Participants were asked whether they had the knowledge that SODIS was a good technique to treat water, if yes, how old the child was.
  - Participants were asked whether they had the knowledge that SODIS was a good technique to treat water, if yes, how old the child was.

Kraemer & Master (2010)

- SODIS intention and usage: 
  - (No item given)
  - Participants were asked whether they had the knowledge that SODIS was a good technique to treat water, if yes, how old the child was.
  - Participants were asked whether they had the knowledge that SODIS was a good technique to treat water, if yes, how old the child was.
  - Participants were asked whether they had the knowledge that SODIS was a good technique to treat water, if yes, how old the child was.

Hen & Master (2008)

- SODIS usage: 
  - (No item given)
  - Participants were asked whether they had the knowledge that SODIS was a good technique to treat water, if yes, how old the child was.
  - Participants were asked whether they had the knowledge that SODIS was a good technique to treat water, if yes, how old the child was.
  - Participants were asked whether they had the knowledge that SODIS was a good technique to treat water, if yes, how old the child was.

Tamis et al. (2013)

- SODIS water consumption: 
  - (No item given)
  - Participants were asked whether they had the knowledge that SODIS was a good technique to treat water, if yes, how old the child was.
  - Participants were asked whether they had the knowledge that SODIS was a good technique to treat water, if yes, how old the child was.
  - Participants were asked whether they had the knowledge that SODIS was a good technique to treat water, if yes, how old the child was.

Tamis et al. (2013)

- Consumption of boiled water: 
  - (No item given)
  - Participants were asked whether they had the knowledge that SODIS was a good technique to treat water, if yes, how old the child was.
  - Participants were asked whether they had the knowledge that SODIS was a good technique to treat water, if yes, how old the child was.
  - Participants were asked whether they had the knowledge that SODIS was a good technique to treat water, if yes, how old the child was.

Lilja et al. (2015)

- Chlorination of domestic drinking water: 
  - (No item given)
  - Participants were asked whether they had the knowledge that SODIS was a good technique to treat water, if yes, how old the child was.
  - Participants were asked whether they had the knowledge that SODIS was a good technique to treat water, if yes, how old the child was.
  - Participants were asked whether they had the knowledge that SODIS was a good technique to treat water, if yes, how old the child was.
Flanagan et al. (2015)

Domestic water testing for arsenic (USA)

My family is at risk for drinking contaminated well water. Assess health effects from contaminated water are outweighed.

Water testing results are helpful in protecting the health of my family. I have asked having my well tested by a lab.

I know most of my neighbors expect me to regularly test my water. I know who to contact to get my well water tested. I plan to have my well water tested within the next year.

I would like to get my well tested, but I keep forgetting to.

I am committed to monitoring the quality of my well water.
References


