# User Experience & User-Centered Design

## Health Games User Research Model

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### Conventional Health (game) Intervention Research: Medical Randomized Controlled Trials
- **Theoretical principle:** Health care problem - Central route (ELM) (high elaboration, rational, meta-reflective)
- **Description/implementation:** Comparison of conventional health (game) intervention description/implementation and control group.
- **Effects/Results:** Compare health care problem effects/results of intervention.

### Alternative Health (game) Intervention Research: Medical Randomized Controlled Trials
- **Theoretical principle:** Health care problem - Peripheral route (ELM) (low elaboration, affective, superficial, impulsive)
- **Description/implementation:** Comparison of alternative health (game) intervention description/implementation and control group.
- **Effects/Results:** Compare health care problem effects/results of intervention.

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### Evaluation Methods

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<thead>
<tr>
<th>Phases</th>
<th>implementation and testing</th>
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<tbody>
<tr>
<td>preproduction and prototype</td>
<td>focus groups, heuristic evaluation (including heuristics for playability)</td>
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<td>interviews, play testing (including biometrical measurements)</td>
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<td>informal play testing observation, questionnaires (semi-structured) interviews</td>
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<td>quantitative comparisons of gamers' behaviors, questionnaires focusing on users' attitudes &amp; experiences</td>
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### Theory/principle

<table>
<thead>
<tr>
<th>Long term behavior change</th>
<th>Short term behavior change</th>
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</thead>
<tbody>
<tr>
<td>Central route (ELM) (high elaboration, rational, meta-reflective)</td>
<td>Medium to long term attitude, affective &amp; cognitive change</td>
</tr>
<tr>
<td>Peripherial route (ELM) (low elaboration, affective, superficial, impulsive)</td>
<td>Short to medium term attitude &amp; affective change</td>
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### Persuasive principles

- **Narrative persuasion:** narrative transportation, narrative identification, narrative perspective
- **Procedural metrics:** arguments by goals & rules: stimulate (meta-) reflection
- **Persuasive technology:** mechanisms that stimulate tunneling, tailoring, suggestion: self-monitoring, conditioning
- **Tools of Influence:** behavior is based on fixed action patterns

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### Behavior change theories

- **Social Cognitive Theory:** stimulus (meta)cognitive processes, familiarization, self-regulatory & self-reflective processes
- **Self-Determination Theory:** self-determination theory
- **Theory of reasoned action/planned behavior:** inclination to behavior change depends on attitude towards new behavior & perception judgment of others, and on perceived control over behavior
- **Transtheoretical Model of behavior change:** control and stimulus transition to next stage in behavior change process: stimulate user to think about (and reflect upon) making the move.