Relax Yourself

Using Virtual Reality to Enhance Employees Mental Health and Work Performance

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Planned Functions of the VR application

- High stress level
- Closed immersive environment
- Customization by users
- Adaptation toward users physiological responses
- Immersion in VR environment and escape from reality
- Relaxation and enhancement of emotional state

Research Perspective

Studies demonstrated that people are cognitively and emotionally overwhelmed by the increasingly digitized work and leisure world.

Short relaxation and sleep phases in the workplace were found to be beneficial.

One option are space-consuming and costly sleeping capsules, which do not isolate employees completely from their environment making deep relaxation difficult.

The present work aims to develop and evaluate a fully immersive, closed and portable VR-based relaxation environment, which gives users space to relax, while also actively accompanying and guiding them.
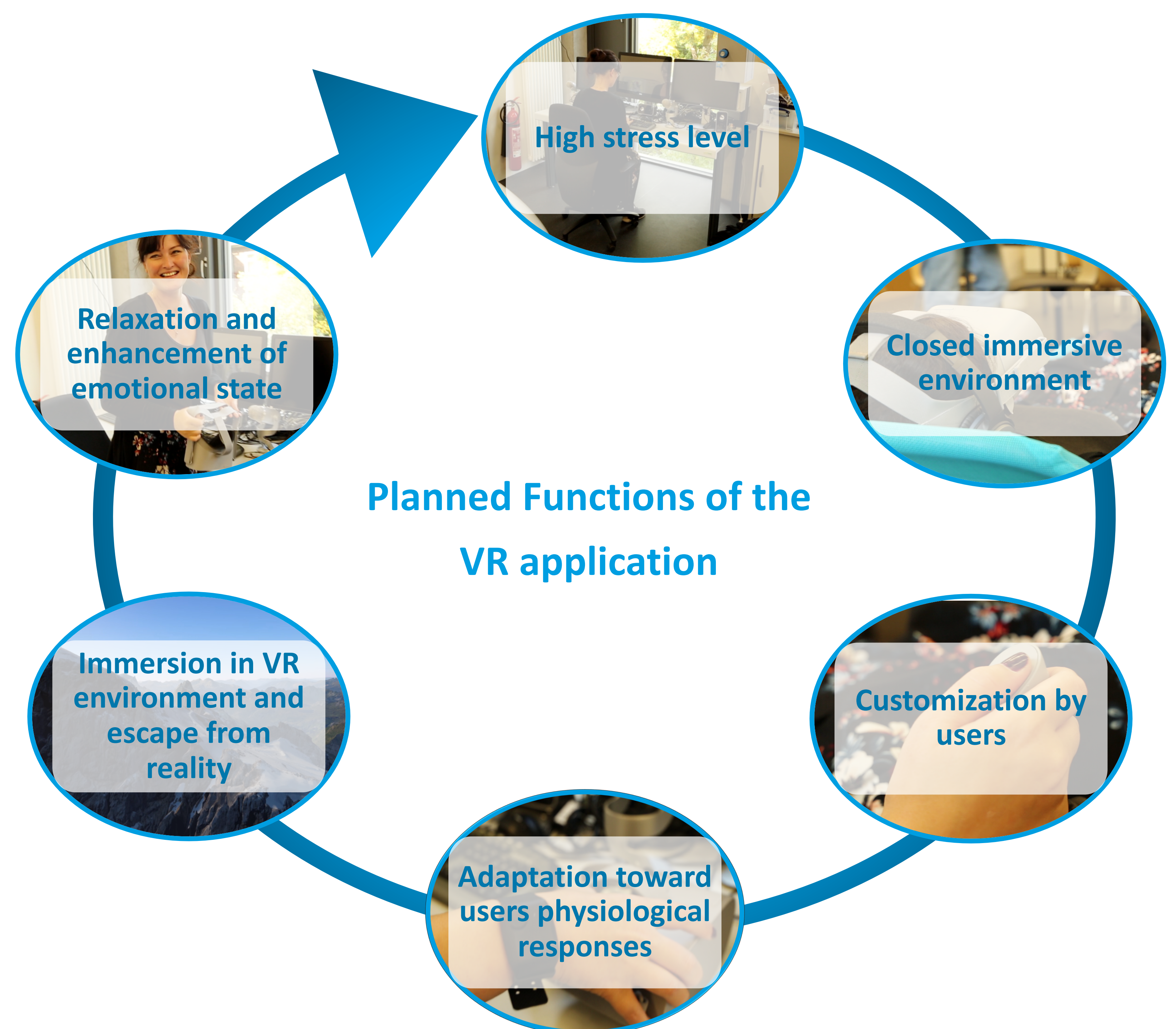
Evaluation Study : Method

Measures & Sample:

- 2 points of measurement (with a one week break)
- Self-report data e.g. positive & negative affect and strain
- Qualitative statements to obtain feelings of relaxation and acceptance
- Heart-rate measure (to be analyzed)
- 61 participants (average age 23 (M = 22.97, SD = 5.79))
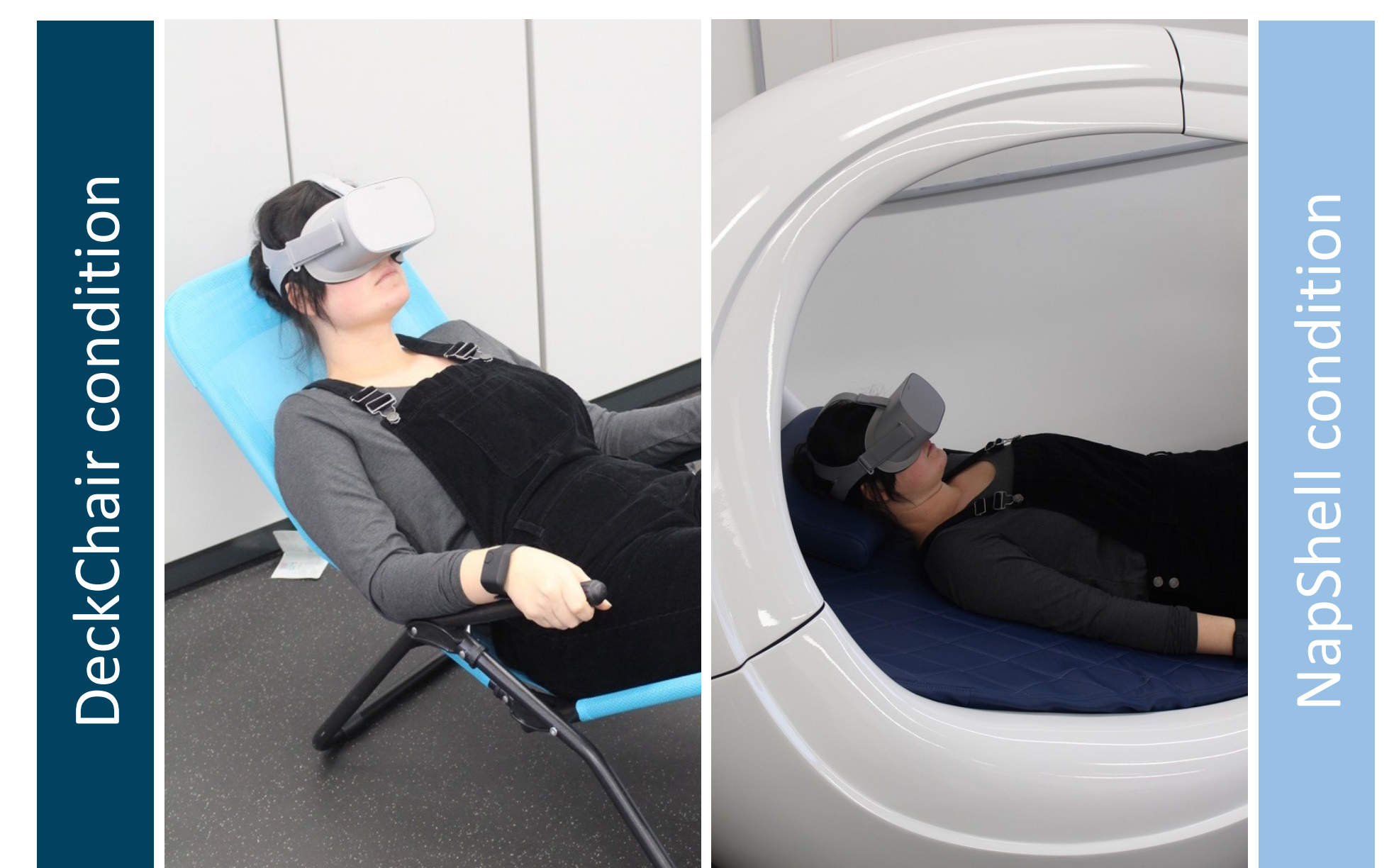
2 (VR vs. No VR) X 2 (NapShell vs. Deck Chair) Between Subjects Design

## Evaluation Study : Results

Quantitative Analysis:

Positive affect decreased after applying the relaxation, $F(1, 57) = 7.26$, $p = .009$, $eta^2 = .113$.

Negative affect decreases significantly, $F(1, 57) = 17.01$, $p < .001$, $eta^2 = .230$.

Strain decreased significantly after the relaxation, $F(1, 57) = 45.370$, $p < .001$, $eta^2 = .443$.

VR had no significant effect on neither mood (i.e. positive nor negative affect) nor perceived strain.

We founds no effect of positioning condition (sleeping capsule vs. deck chair).
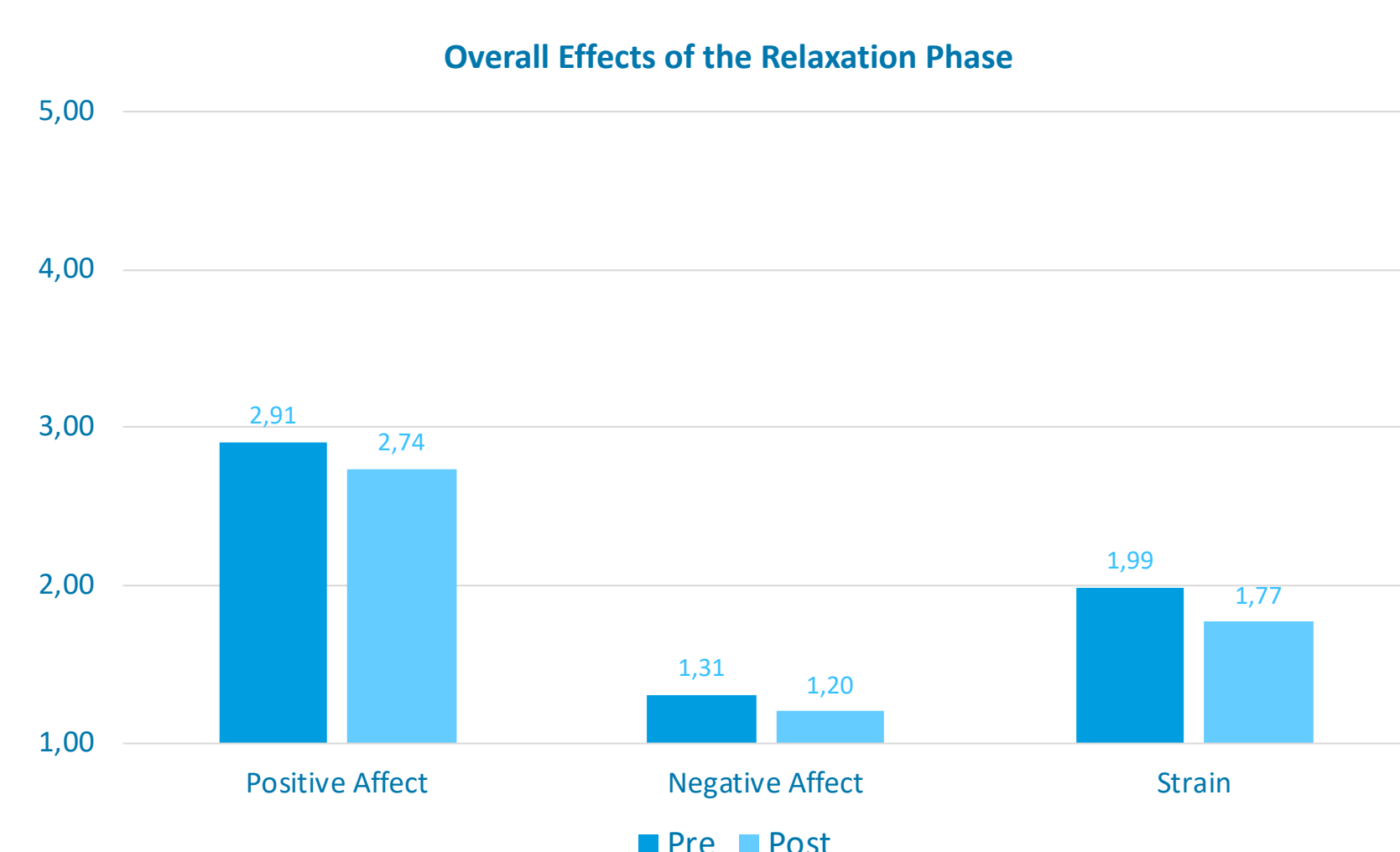
Qualitative Analysis:

Immersive effect of the VR application helped people to relax faster.

Users highlighted the possibility to escape from reality and connected it with a positive outcome on their relaxation and wellbeing.

People in the no VR condition stated that a more private surrounding is needed.

VR technology helps people to forget their surrounding and relax in various environments.

Participants either wished for customizable content or different visual or audio cues.

VR technology seem to overwrite other surrounding factors like light or the reclining position.

Future Work

Refinement of VR Application:

- Further VR environments and audio stimuli
- Customization of VR environment and audio
- Adaptation to the users' physiological data
- Visually integration of physiological data into the application

Future Studies:

- Objective measures (analysis of physiological data)
- Influence on concentration or other performance outcomes
- Examination of effects of customization by users vs. adoption by application