Being virtually with others makes me happy - The influence of immersion, social and non social video contents on positive emotion induction

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To cite this version:

Katarina Pavic, Laurence Chaby, Thierry Gricourt, Dorine Vergilino-Perez. Being virtually with others makes me happy - The influence of immersion, social and non social video contents on positive emotion induction. SAS Positive Emotion Preconference, Mar 2022, Virtual Conference, France. hal-03975689

HAL Id: hal-03975689
https://hal.sorbonne-universite.fr/hal-03975689

Submitted on 6 Feb 2023

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INTRODUCTION

Positive emotions have health benefits [1] and are tightly linked to well-being [2].

Critical issue : How to foster positive emotions and experiences among users?

Positive technology framework suggests technologies may improve users’ subjective, psychological and social well-being [3].

- Virtual Reality (VR) appears as a suitable technology for fostering positive emotions.
- But VR’s efficacy has mostly been assessed with “subjective” measures (questionnaires), more rarely with “objective” ones (e.g., physiological measures).
- Widespread use of natural (i.e., nonsocial) video contents for inducing positive emotions [4], yet social contents can have an influence on induced emotions and arousal [5].

AIM OF THE STUDY

- Investigate immersion (i.e., VR vs Screen presentation) effects on positive emotion induction
- Comparing social and nonsocial (landscape) contents influence on elicited emotions
- Confronting “subjective” and “objective” measures for assessing participants’ emotional states

MAIN CONCLUSION

- The immersive nature of VR leads to more positive emotions and arousal on both subjective and objective levels
- Differences between video contents:
  - Nonsocial contents seem particularly efficient on a physiological level = Natures’ well-known benefits for relaxing and restoring resources [5]
  - Social contents lead to an increased subjective and physiological arousal
- Potential applications: foster positive emotions through VR in more vulnerable and/or isolated users (e.g., elderly users)

REFERENCES


METHOD

Participants : 26 healthy undergraduate students
- 16 women, 10 men, 23 years ± 2.6
- Non-inclusion of participants having major psychiatric and/or neurological disorders (epilepsy).

Material : 25” screen (resolution of 1920 x 1080 pixels);
- HMD Samsung Odyssey+ (110° Fov, resolution of 1440 x 1600 pixels);
- Empatica E4 wristband

Stimuli : Eight 360° videos shot with a GoPro 360° camera and a tutorial video

Procedure

- Consent Demographic data
- Visual Analogical Scale (VAS) HADS
- Psychological scales
- SAM, VAS, Presence

Temporal changes of Skin Conductance Level (ΔSCL) and Heart Rate (ΔHR) regarding technology and video contents

RESULTS

Valence and arousal ratings regarding technology and video contents

Main effect of technology : VR induced more positive emotions and arousal compared to screen presentation.
Main effect of content : Social videos are perceived as more positive and arousing than nonsocial video contents.
No Technology x Content interaction on valence or arousal ratings