

Indian VR affective database - self-report measures & EDA

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Introduction

The study aims to validate the Stanford VR affective database for the Indian population. We selectively chose 10 videos (Figure 1) on the basis of the Stanford valence and arousal ratings (Figure 2) and viewing time. Self-report (Figure 4(b)) and Electro-dermal activity (EDA), recorded using BioNomadix device, were used to assess participants' affective emotional state.



Figure 1: Image clips from the videos used in the experiment.

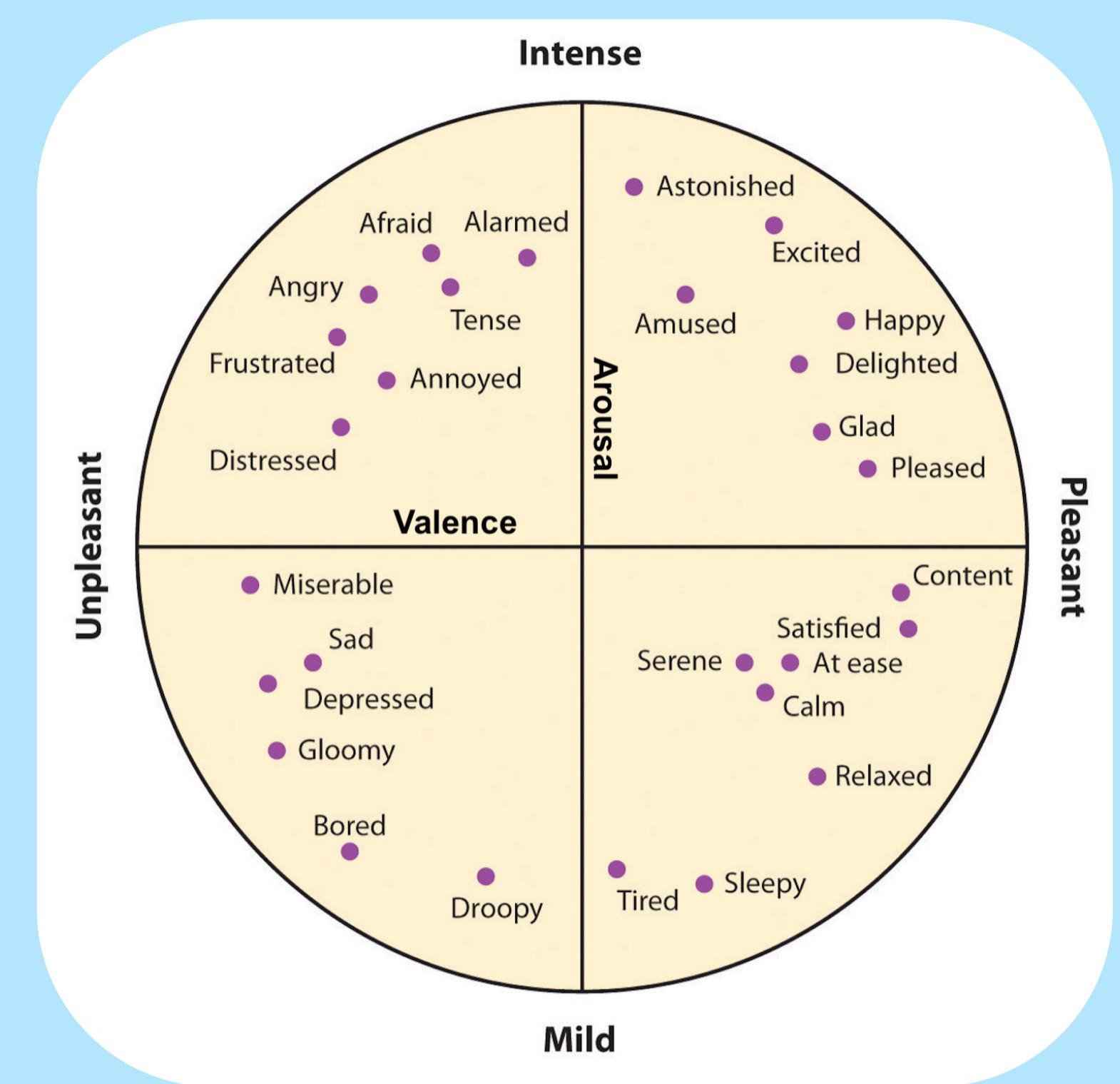


Figure 2: 2D Circumplex Model of valence and arousal depicting various Emotions.

Method

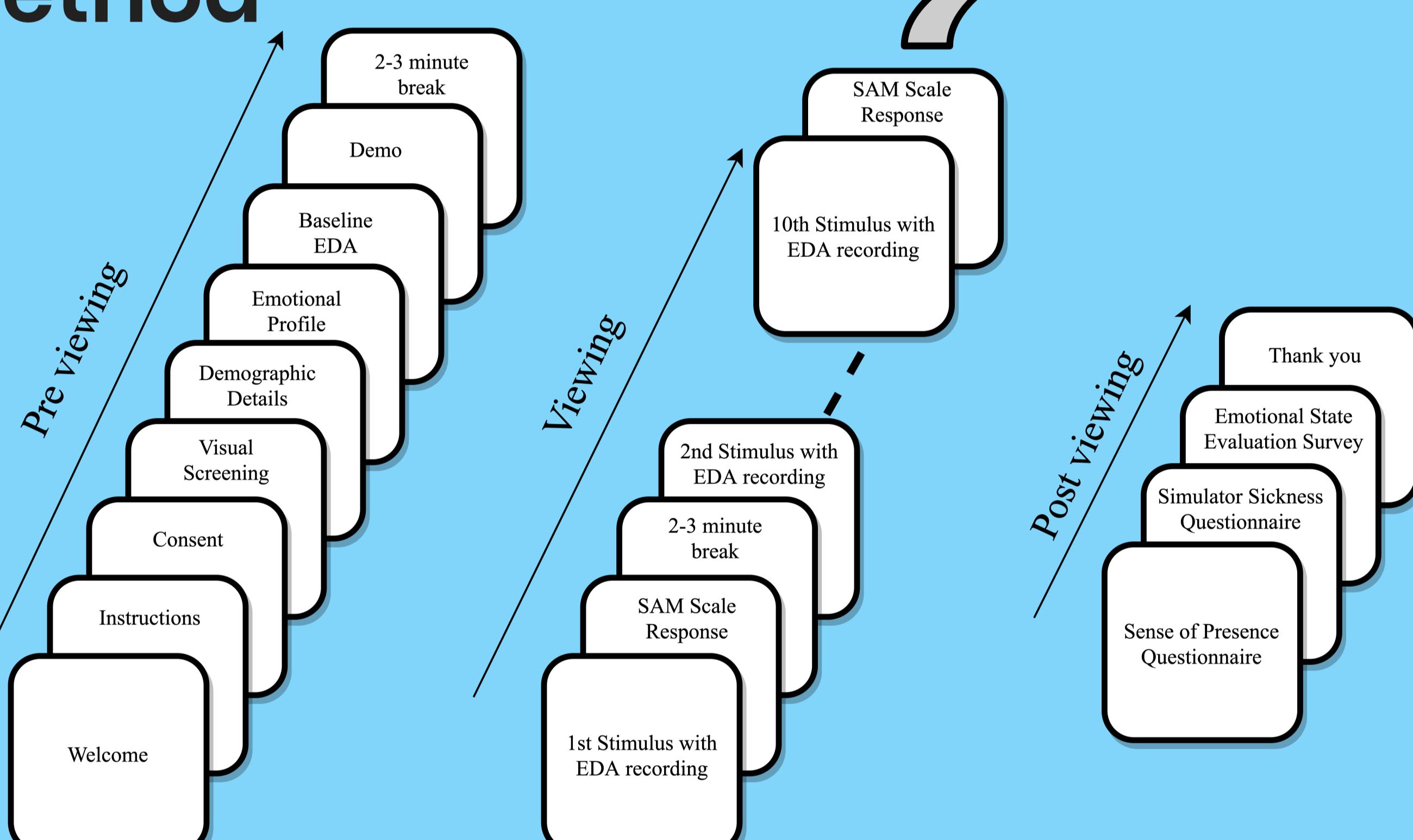
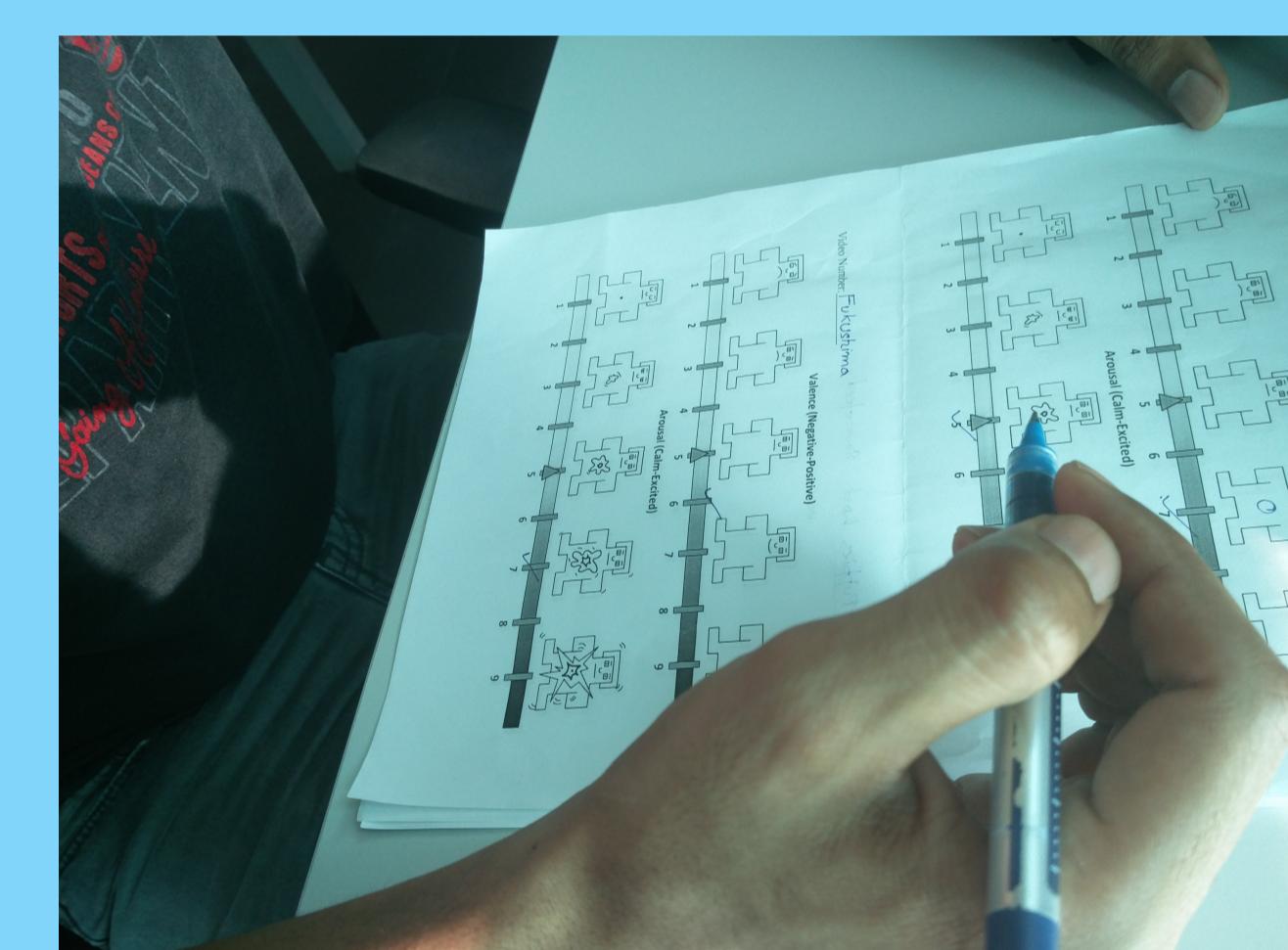


Figure 3: Experimental procedure



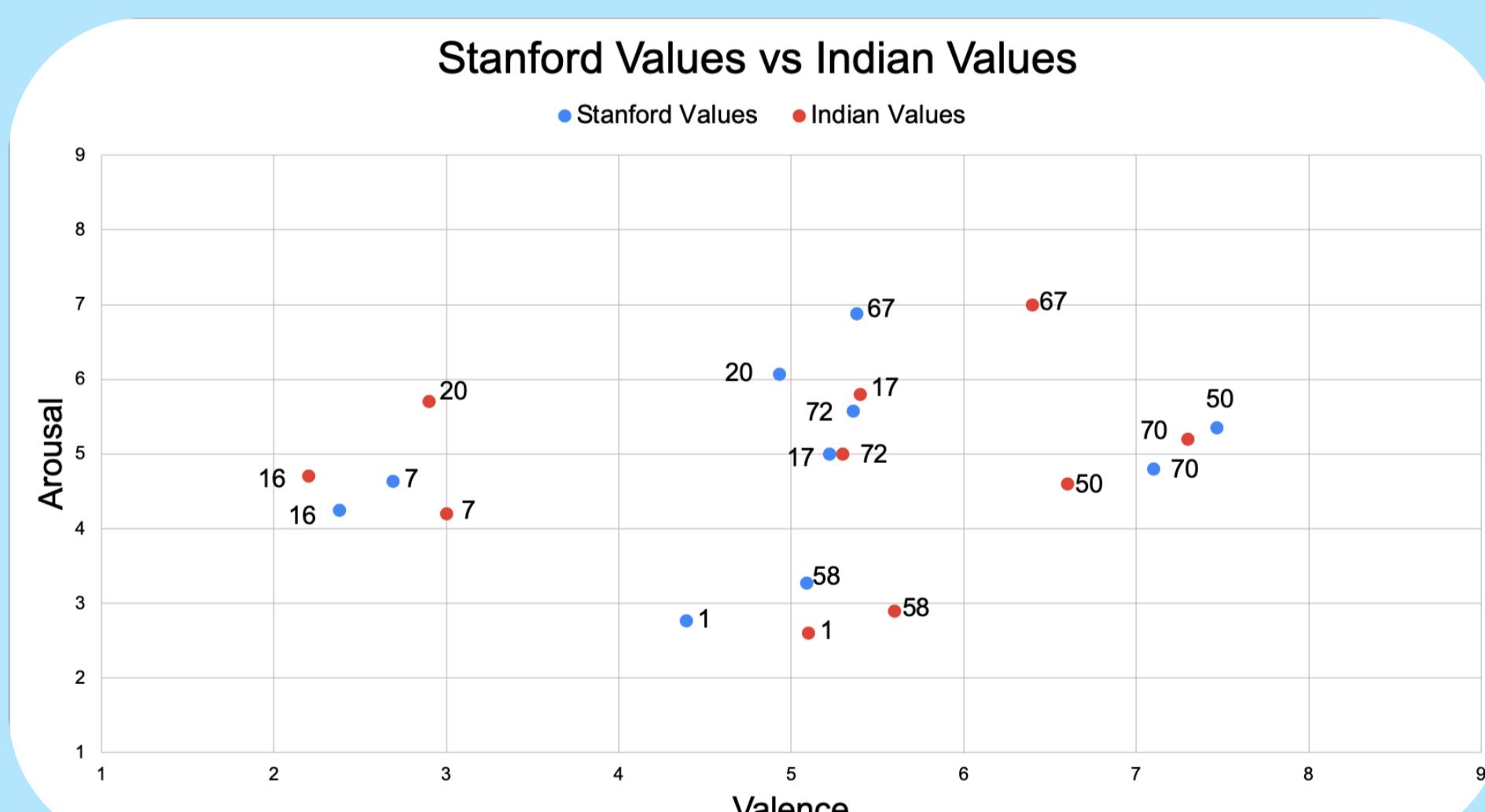
(a)



(b)

Figure 4: Viewing process (a) Watching the stimulus on HMD (b) Marking self-report ratings of valence and arousal on SAM (Self Assessment Manikin) scale

Results and Future work

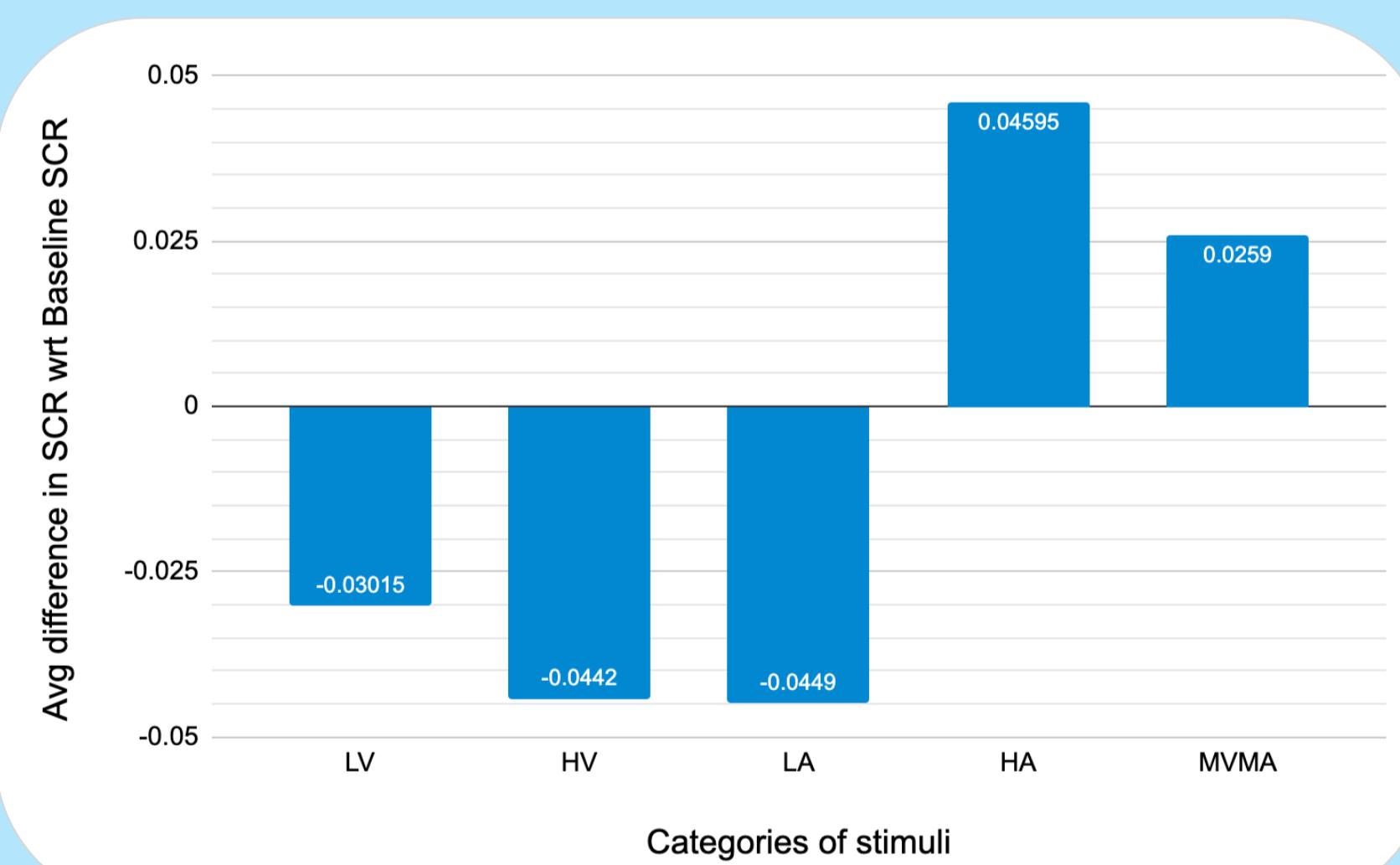


(a)

Category	p value (N=10)
Valence	0.978
Arousal	0.878

(b)

Figure 5: Analysis depicting (a) Comparative variation (b) lack of statistically significant difference between Stanford and Indian ratings



(a)

Category	p value (N=10)
HV	0.357
LV	0.574
HA	0.543
LA	0.182
MVMA	0.663

(b)

Figure 6: Analysis depicting (a) Comparative variation (b) lack of statistically significant difference between SCR with & without stimulus

We plan to extend this study further with an increased sample set and examine the correlation between behavioral, physiological and psychological data. We will be using this study to do further research on emotional disorders such as depression.

References

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