

Does the Improvement of the Unworkable Change Agendas Measured by IRAP Predict the Change in Acceptance Behavior after the Acceptance Intervention?

Kazuya Inoue, Nozomi Tomita, & Hiroaki Kumano

Faculty of human Sciences, Waseda University.

Abstract

For the success of an acceptance intervention, it is important to let go of the unworkable change agenda in Acceptance and Commitment Therapy (Sakai et al., 2014). We have developed an Implicit Relational Assessment Procedure to measure unworkable change agenda (CA-IRAP; Inoue et al., In press). In the current study, we examined whether CA-IRAP was able to predict changes in accepting behavior after accepting interventions compared to the explicit measure. This study did not show that the lower the score of the change agenda-IRAP, the easier is the acceptance behavior during the speech after acceptance intervention. However, the change agenda IRAP score in pretest predicted the change amount rumination after the speech (Post - Pre).

Background

Change Agendas that lead people to think that “reducing or removing undesirable thoughts and feelings will solve problems and lead to a more successful life” are considered unworkable in Acceptance and Commitment Therapy (ACT; Flaxman, Blackledge & Bond, 2011).

Methods

Participants

The 83 undergraduate and graduate students were randomly assigned to either an acceptance or a control group. The final analytic sample were an acceptance group ($N = 22$, mean age = 21.00 ± 3.85 years) and a control group ($N = 26$, mean age = 19.96 ± 1.43 years) of undergraduate students.

Measuring material

1. Change agenda IRAP (Inoue et al., In press): The CA-IRAP required participants to respond to various statements about the Change Agenda and acceptance. These statements were presented in a label and target stimulus (Fig. 1). Participants were required to achieve a maximum median latency of no more than 3000 ms and minimum accuracy of no less than 80% correct responses. The practice blocks were maximum of 4 sets. The test blocks were 3 sets. The Score is DIRAP score.

2. Change agenda questionnaire-believability (Shima et al., 2018) : 7-item, 7-point Likert-type scale (1 = never true, 7 = always true). High scores correspond with high believability of the Change Agenda.

3. Speech task: 2 minutes. There were two types of speech themes, one in favor of or against animal testing, and one in endorsing or against death penalty, which were counterbalanced.

4. The behavior index of acceptance: The time to keep watching the audience’s eyes during speech task. Participants were instructed to maintain eye contact as far as possible and deliver a speech to an audience via the screen monitor. The eye contact duration was measured by Tobii glass 2.

5. Numerical rating scale for anxiety and nervous during speech task: Item 1: I let the discomfort stay with it (1[I tried to deal with it.]-10[leaving it.]); This index was used as a manipulation check for acceptance intervention. Item2: About the degree of anxiety during speech (1 [I was not anxious.]-10[I was anxious.]). Item 3: About the nervous. Item 4: About the rumination.

6. Liebowitz social anxiety scale-Japanese version (Asakura et al., 2002) 48-item (fear and avoidance), 4-point Likert-type scale. High scores correspond with high fear and avoidance.

Change Agenda IRAP (CA-IRAP)

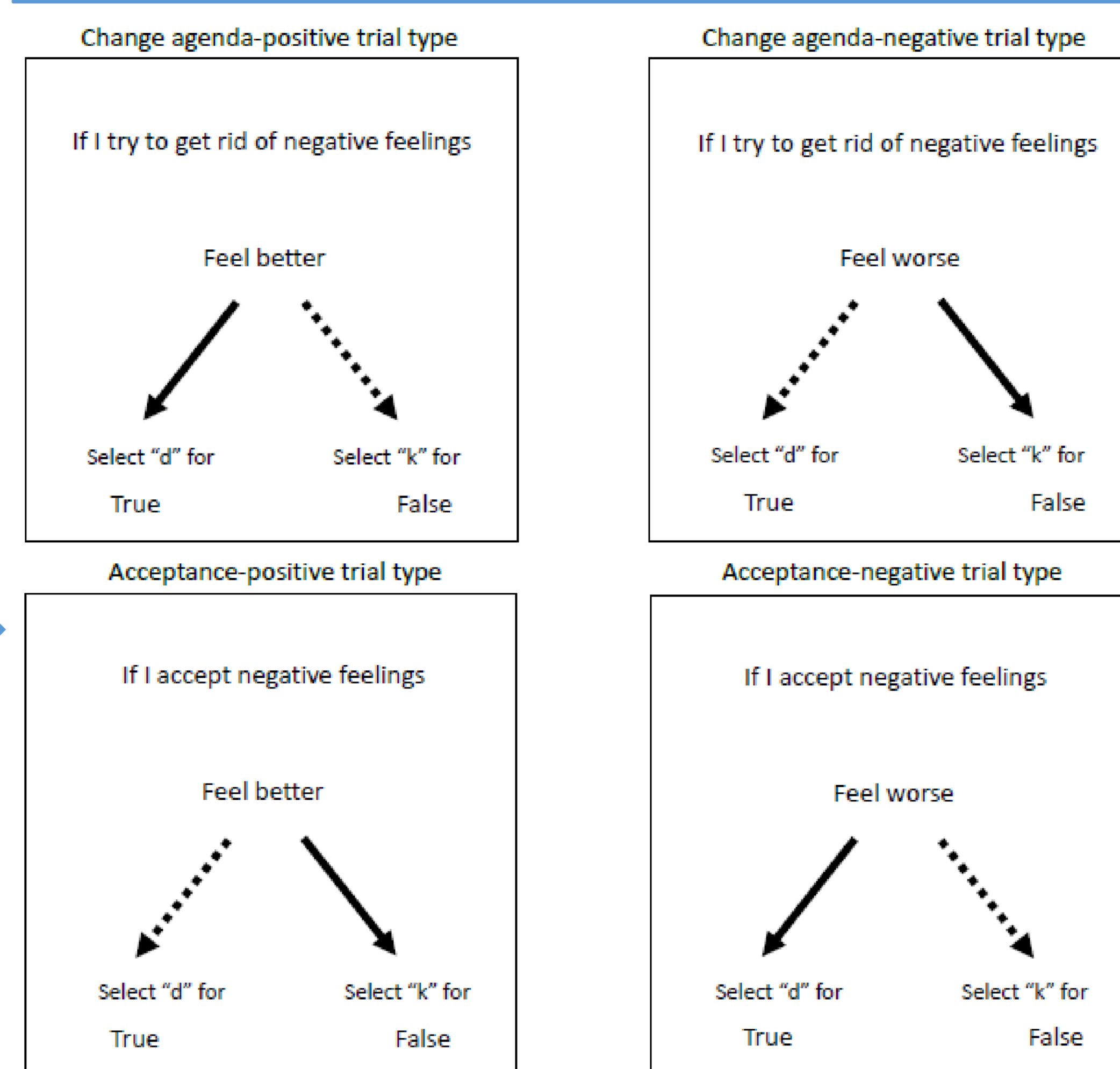


Figure 1 An Example of the Change Agenda IRAP Trial-Types.

Note. Slid arrows depict correct responses for consistent blocks and dashed arrows for inconsistent blocks; arrows did not appear on screen during trials. Targets for sample 1 include “feel better”, “feel relieved” and “problem solved”. Targets for sample 2 include “feel worse”, “feel burdened” and “life gets tough”.

The behavior index of acceptance

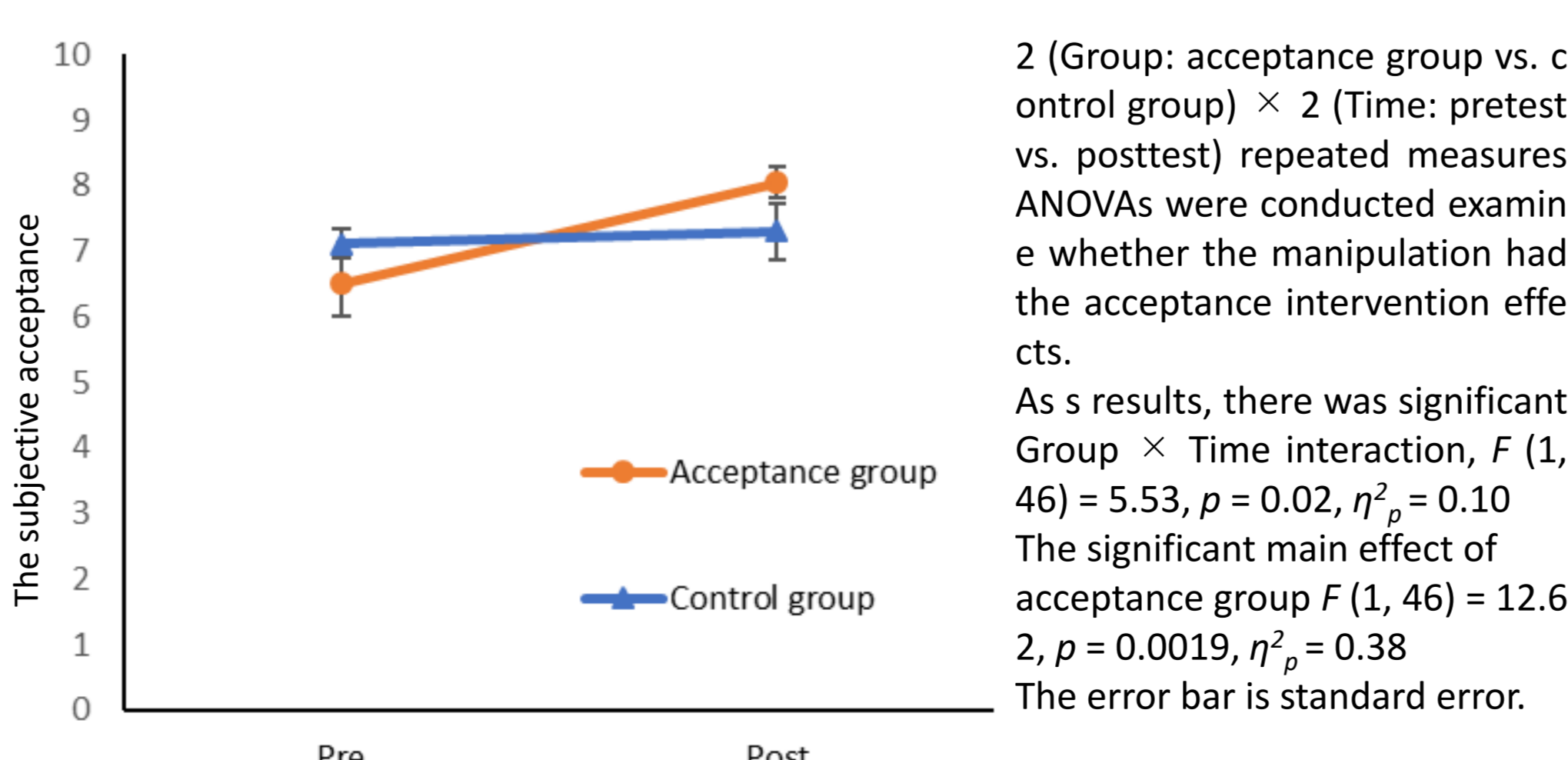
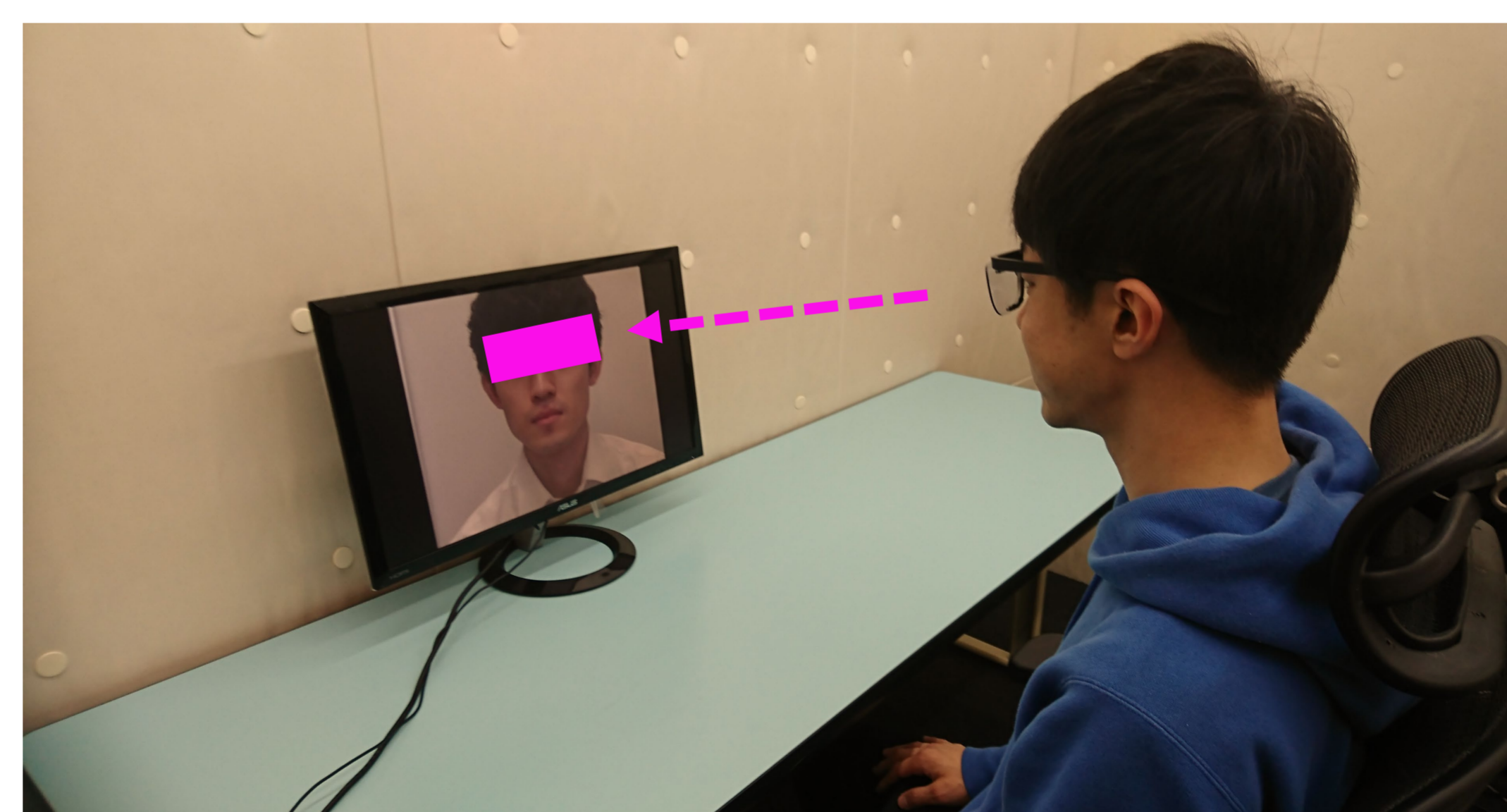


Figure 3 . Manipulation check: acceptance intervention.

Experimental design

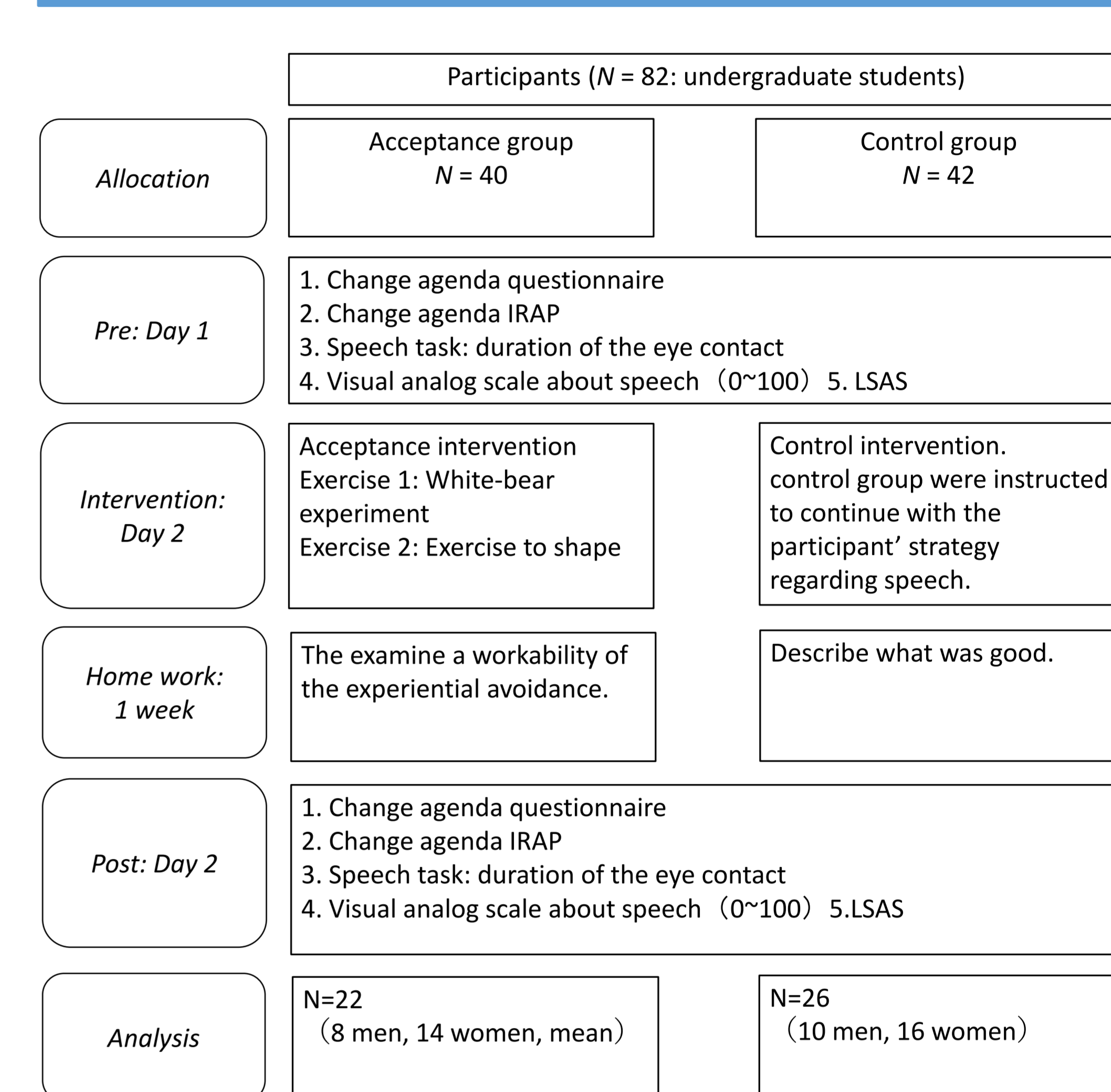


Figure 2 The Experimental Design.

Acceptance intervention

Exercise 1. White-bear experiment

Purpose: To understand the inefficiency of control strategies
Question: “Try not to think of a white bear for one minute !”

Exercise 2. Exercise to shape

Purpose: promote attitude to observe (acceptance) about undesirable event
Question: “Choose one recent undesirable scene” What color is it ? What shape is it ? How big is it ?

Hypothesis

A negative correlation was observed between the CA-IRAP D score in pre-test and the change rate of eye contact duration. We believe that CAQ (Explicit measures) could not predict the change rate of eye contact duration.

Results & Discussion

Table 1. Descriptive statistics of the each variables.

	Experiential condition	Pretest		Posttest	
		M	SD	M	SD
Subjective acceptance	Acceptance	6.04	2.59	7.23	1.60
	Control	7.12	1.97	7.31	2.17
The duration of eye contact	Acceptance	0.25	0.20	0.28	0.22
	Control	0.20	0.21	0.20	0.21
CAQ-b	Acceptance	39.14	6.15	35.36	5.88
	Control	36.54	7.55	33.54	8.78
CA-Posi	Acceptance	0.31	0.41	0.26	0.31
	Control	0.31	0.69	0.23	0.70
CA-Nega	Acceptance	0.18	0.35	0.10	0.50
	Control	0.28	0.72	0.24	0.64
Accept-Posi	Acceptance	-0.13	0.620	-0.46	0.69
	Control	-0.03	0.78	-0.14	0.79
Accept-Nega	Acceptance	0.16	0.39	-0.14	0.60
	Control	0.15	0.53	0.02	0.46
CA-IRAP	Acceptance	0.13	0.32	-0.06	0.40
	Control	0.13	0.54	0.09	0.54
Anxiety during the speech	Acceptance	7.50	2.26	4.95	2.06
	Control	7.92	1.70	5.62	2.17
Rumination after the speech	Acceptance	6.41	2.04	4.77	2.09
	Control	6.35	2.74	5.54	2.32
LSAS fear	Acceptance	36.14	10.16	33.62	13.26
	Control	33.62	13.26	42.54	14.92
LSAS avoidance	Acceptance	30.32	12.74	26.88	13.35
	Control	26.88	13.35	28.04	12.99

Table 2 . Disgust at speech scene (N = 48).

Both group	Day 1		Day 1		p value	95% CI
	Before the speech		After the speech			
	M	SD	M	SD		
Anxiety	4.21	2.17	5.67	2.09	0.000	-2.17 to -.745
Nervous	4.35	1.77	5.48	2.25	0.005	-1.88 to -0.36

To test whether the speech task had the intended effect of increasing participant’ anxiety levels, paired t test was conducted. As a results, the speeches evoked anxiety and nervous for the participants.

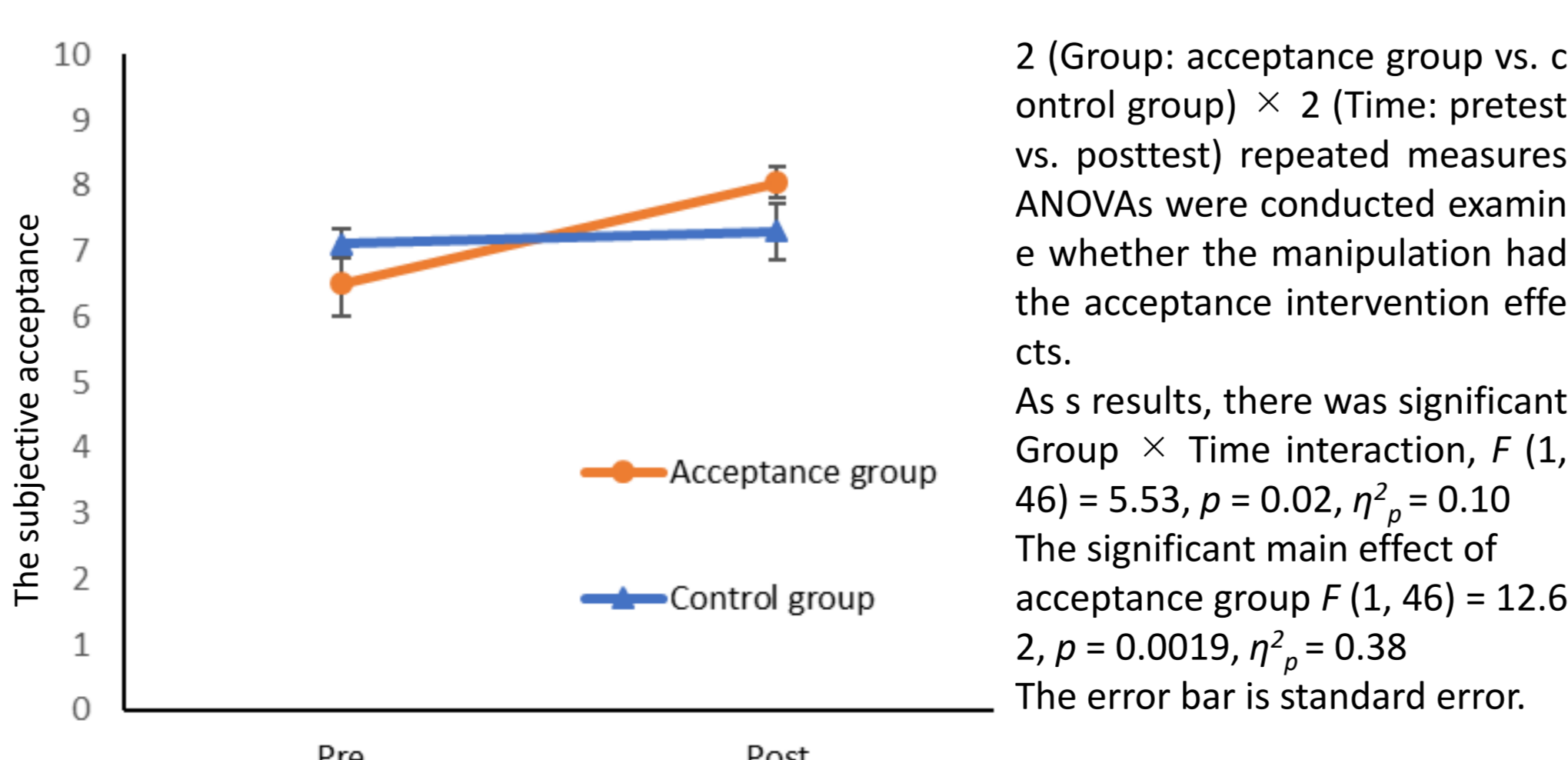


Figure 3 . Manipulation check: acceptance intervention.

Table 3 . Spearman’s rank correlation coefficient (N = 22 in acceptance group) .

Measures	1	2	3	4	5	6	7	8	9	10	11
1. CAQ-b in pre											
2. CA-Positive in pre	.416**										
3. CA-Negative in pre	-.033	.456*									
4. Accept-Positive in pre	.236	.392†	.098								
5. Accept-Negative in pre	.090	.211	.106	.287							
6. Overall D score in pre	.228	.816**	.666**	.633**	.434*						
7. The change rate duration of eye contact (Post / pre)	-.200	-.041	.224	-.042	.187	.098					
8. The change amount anxiety during speech (Post - Pre)	.154	.220	.049	.218	.335	.284	-.218				
9. The change amount rumination after the speech (Post - Pre)	.190	.201	.192	.503*	.248	.361†	-.031	.433*			
10. LSAS fear in pre	.163	-.110	-.305	.109	-.607**	-.271	-.367†	-.129	-.071		
11. LSAS avoidance in pre	.096	.116	-.179	-.007	-.422	-.143	-.005	-.452*	-.216	.627**	