Methods

Participants:
Art students: n=30 (Mean age=22.2, SD=4.5, 18 female).
Non-art students: n=33 (Mean age=20.6, SD=3.0, 28 female).

Procedure.
1. Drawing tasks: Creative (TCCT: Figural) and observational task (Figure 1).
2. Ambiguous figures: SFM cylinder and overlapping squares (Figure 2)
   - Hold, passive and switch instructions (2 mins per condition)
3. Executive function: Flanker inhibition and response switching tasks

Results

Observational and creative drawing ability.
- Art students scored higher in observational, t(61) = 11.53, p<.001, d = 2.90 and creative drawing tasks, t(59) = 2.23, p<.05, d=0.58 (Figure 3).
- Positive correlation between scores on the observational drawing task and scores on the creativity task, r(59) = 0.42, p<.001.

Ambiguous Figures task reversals.
- Cylinder (Figure 4: left)
  - Main effect of art group, F(1, 55) = 6.84, p<.05, η² = 0.11.
  - Interaction between condition and group, F(2,110) = 7.45, p<.001, η² = 0.08.
- Square (Figure 4: right)
  - Trending main effect of art group, F(1, 50) = 2.08, p=.15, η² = 0.04.
  - Trending interaction between condition and group, F(2,110) = 2.32, p=.10.

Discussion
- Art students can flexibly switch between ambiguous figure percepts.
- Switching predicts observational but not creative drawing ability, contrary to previous research (Doherty & Mair, 2012).
- Art students have lower executive inhibition than non-art students; this correlates with observational and creative drawing skill.
- Little relationship between perceptual flexibility/inhibition and cognitive flexibility/inhibition.
- Domain transfer of visual arts skills is limited to the visual modality, but visual flexibility appears to be key to observational skill.

References