The Ohio State University

Can you tell what they're feeling?:Relationship between emotion and dance movement

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INTRODUCTION

Extracting Emotions from Dance

- Speed, tempo, changes, and tension in body movement endues specific emotions (Camurri et al., 2003)
- Anger is associated with short high-tension movements
    - Grief is associated with long slow movements
- Quicker, expanding emotions are associated with the emotion of happiness. (Van Dyck et al., 2013)

Performer's Gender influence on Emotion

- Men body language expresses slight cues of anger, and women are associated with nurturing and happy emotions (Krüger et al.,2013).
- Men are more associated with angry emotions, and woman are associated with happy emotions (Kelly & Hutson-Comeaux, 1999).

Hypotheses

Given the previous findings that men tend to have more aggressive
and harsher movements when expressing emotio ns, we have predicted that:

H1: Participants will be able to identify more accurately the male dancer than the female dancer.

H2: Participants with dance experience will identify more accurately the emotions to the dances.

PARTICIPANTS

- 74 undergraduate students recruited form Intro to Psychology at Ohio State University, Marion Campus
- 46 female, 28 male
- 17 participants had experience with dance

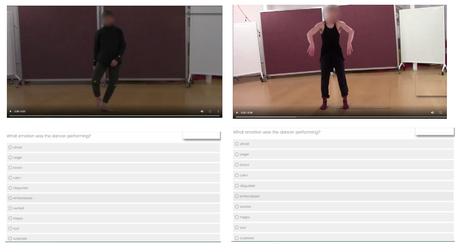
	Female	Male	Dance Experience
	46	28	17
Total	74	74	74

METHODS

STIMULI

- There are 20 dance videos total. There were two dancers that each displaying the same 10 emotions.
- The emotions were afraid, angry, bored, calm, disgusted, embarrassed, excited, happy, sad, surprised.
- Each dancer, one male and one female, had their own interpretation of each emotion.
- The dancer's faces were blurred face to avoid biasing the participant's choice of emotion.

Stimuli example



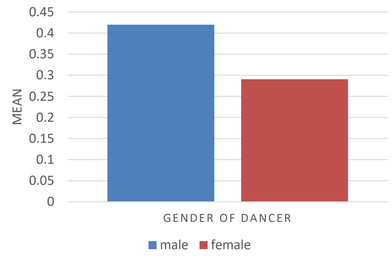
PROCEDURE

- Participants were directed to survey
- Pretest on confidence on how well participants will guess emotion
- Practice trial (video and matching emotion)
- Watched one video at a time, list of emotions were under the video
- All participants watched the same 20 videos in randomized order
- Participants' dance experience and demographics (gender)
- Post test on confidence on how well participants had guessed emotion

RESULTS

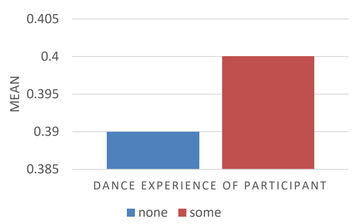
- Hypothesis was tested using independent sample T test predicting accuracy of participants regarding gender of dancer
- Gender of dancer did not significantly predict accuracy of identification of emotions, $t(18) = 1.56$, $p = 0.138$

Figure 1. Mean of accuracy identification of emotions between gender of dancers



- Hypothesis was tested using independent samples t-test predicting accuracy of participants regarding their dance experience
- Participant's dance experience did not predict accuracy in matching emotions to dance movement, $t(73) = 0.29$, $p = 0.78$

Figure 2. Mean difference between dance experience of the participants



GENERAL DISCUSSION

- There were no significant differences between the dancer's genders and the identification of the emotions portrayed.
- There were no significant difference between participants' dance experience and being able to accurately identify the emotions the dancers embodied.

ADDITIONAL FINDINGS

- Although there was no statistical difference, participants were able to better identify the male dancer's emotions through dance than they did the female. There were nine videos where the dancers' faces were not properly censored/blurred. In four video of the male dancer and two videos of the female dancer clear facial expression was shown. This could have interfered with the participant's decisions.
- There was a pattern between the participants' correct/incorrect answers. The videos where facial expression had significantly higher accuracy with proportions around 50% or higher. This higher accuracy could be accredited to the visual of a smile, disgusted face, or frown.

FUTURE WORK – desired study

- As a pilot study, the expectations of the results weren't clear from the start. There were multiple variables affecting the direction of the study, so identifying desired variables initially would better orientate the study.

FUTURE WORK – new study

- Improve quality of mask over dancers
- Standardize the dance movements per emotion rather than have the dancers individually interpret the emotion
- Initial reaction to video rather than being able to rewatch it could potentially change results
- Prime participants to describe stereotypical emotions related to each gender, have two conditions: male does masculine movements, female does feminine movement, and the second condition would be male doing feminine movements and females doing masculine movements.

REFERENCE

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