The Impact of Language on Cross-cultural Emotion Perception: An fMRI Study
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Increasingly, research suggests that language plays an important role in emotion perception by facilitating access to emotion-specific semantic knowledge that renders incoming visual information into discernible expressions of emotion. Furthermore, other research shows that cultural differences in emotion-concept knowledge can produce corresponding differences in visual emotion perception. Here, we used fMRI to investigate how priming participants with English emotion-words (i.e., anger, disgust) would influence neural activation during the perception of White, Western-prototypical facial expressions of anger and disgust, as well as how one’s cultural background (i.e., Chinese Native, White American) may influence this activation. We found that relative to White American participants, Chinese Native participants displayed greater activation in regions associated with the use of semantic knowledge such as the right middle temporal gyrus and left inferior frontal gyrus when primed with emotion-words before emotion perception. Across all participants, we found activation in areas linked to language and face processing. These findings suggest a differential benefit of emotion-word priming on the basis of cultural differences and further support the importance of language and access to emotion concepts in emotion perception.