Open peer review report 1

Reviewer: Chaur-Jong Hu, Taipei Medical University, Shuang Ho Hospital, China.

Comments to the authors:

In this meta-analysis study of functional MRI (fMRI), the investigators explored the brain regions activated by empathy for pain which was caused by facial expressions of pain. They found emotional circuit and face processing recognition were involved in empathy for pain. This is a well conducted study. Although this study provided limited novel knowledge, it might be interesting for the readers of this journal. However, there are few concerns.

- 1. Four articles with repetitive data or of low quality were excluded. The authors are suggested to describe the reasons with details.
- 2. The authors mentioned only young and middle-aged participants were included. What is the age criterion in this study?
- 3. There are 20 foci reported in 178 cases among 8 trials. What are the cut-off value for making the conclusion?