The relationship between social capital and happiness after the Great East Japan Earthquake
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Background
Previous studies reported positive association between social capital (SC) and happiness. However, there are few study that investigate the association between SC generated after natural disaster and happiness. Thus, the purpose of this study is to investigate the association between SC after Great East Japan Earthquake (GEJE) and happiness in 3 years later using prospective longitudinal cohort study.

Methods
We recruited children who experienced GEJE in 2011 at preschool age and their caregivers and followed them for 3 years (from 2012 to 2015) in the affected areas (Iwate, Miyagi, and Fukushima prefectures). We could follow 159 caregivers at 2015 out of 221 original participants (follow-up rate: 72%). SC was assessed with a 4-Likert scale in 2012 and 2013. Happiness was assessed with a 10-Likert scale in 2014. Traumatic experiences related to GEJE was assessed through an interview by a psychiatrist or a psychologist in 2012. Analysis was performed using multivariate linear regression analyses, adjusting for age, sex, household income, and traumatic experiences. First, we analyzed the association between SC in 2013 and happiness. Second, we analyzed the association between change of SC from 2012 to 2013 and happiness. Among both analysis, we adjusted demographic data in Model 1, traumatic experiences in Model 2 additionally, and PTSD symptoms in Model 3 additionally.

Results
Regarding association between SC in 2013 and happiness, SC was significantly associated with happiness in Model 3 (coefficient: 0.99, 95% CI: 0.52-1.45). Further, as for the association between change of SC and happiness, increase of SC was marginally associated with happiness in Model 3 (coefficient: 0.57, 95% CI: -0.10-1.74).

Conclusions
We found a positive association between SC after GEJE and happiness. Further, the association between increase of SC and happiness was marginal positive. Further research to elucidate the mechanism on how SC after natural disaster induce happiness is needed.

Key messages:
- Social capital is associated with happiness after a natural disaster
- Increase of social capital might be beneficial for happiness