

## ABSTRACT

Acute respiratory infection in Indonesia is still high, especially to toddlers which is of 477.429 illness cases. One of environmental factor causing Acute respiratory Infection is the presence of air polluting material inside the house coming from kitchen using wood burning stove. Such situation could worsen the air quality at home whenever there is no ventilation in the kitchen. This research was done to learn the effect of the use of wood burning stove and gas stove on Acute Respiratory Infection complaint in toddlers in Darurejo, Plandaan, Jombang. This study used cross sectional design. Interviews and observations was conducted to 86 housemates in Darurejo village, Plandaan, Jombang Region. Subjects were drawn from population using purposive sampling. Free variables were kitchen ventilation, cooking frequency, cooking time, and the presence of toddlers inside the kitchen while cooking.

The results showed that in the group using wood burning stove, there was an effect on Acute Respiratory Infection complaint toward kitchen ventilation (p value of 0.007), cooking time (p value of 0.027) and the toddlers presence while cooking (p value of 0.013). On the other hand, the result was different with cooking frequency (p value of 0.069). Moreover, in the group using gas stove, there was no effect among kitchen ventilation, (p value of 0.270), cooking frequency (p value of 0.553), cooking time (p value of 0.786) and the presence of toddlers inside the kitchen while cooking (p value of 0.644) toward Acute Respiratory Infection complaints in toddlers.

It could be concluded that kitchen ventilation, cooking duration, and toddlers presence in kitchen while cooking had significant effect toward Acute Respiratory Infection complaints in toddlers. It is suggested to have qualified kitchen ventilation, using the efficient fuel of LPG and not to take toddlers inside the kitchen while cooking.

Keywords : wood burning stove, gas stove, Acute Respiratory Infection in toddlers.