

UGM Students Explore Influence of Muslim Ritual Prayer on Oral Health

Thursday, 19 July 2018 WIB, By: Marwati



Salat is the ritual prayer of Muslims performed five times every day. Aside from that, this ritual can actually influence oral health.

The study was done by three UGM students, Layung Sekar Prabarayi and Nadia Rully Auliawati from Faculty of Dentistry, also Rais Aliffandy Damroni from Faculty of Medicine, Public Health, and Nursing.

“Our study shows that the act of *salat* and *wudu* (ablution before prayer) have a strong correlation with salivary pH increase, flow rate, and cortisol level,” said Layund.

She said the prevalence of oral diseases in Indonesia is relatively high by 25,9%. Nonetheless, there are plenty of daily activities that can improve oral health if done regularly and properly.

The act of *wudu*, for instance, is able to increase pH level. The higher the level, the higher salivary flow rate and cortisol level but still within normal limit. Sufficient supply of saliva can lubricate the teeth, provide antibacterial activities, and other effects.

Meanwhile, low saliva secretion can lead to dry mouth or xerostomia, a common phenomenon

caused by stress, medication side effect, fluid imbalance, and saliva shortage.

The study was done using static group pretest and posttest design method on 20 subjects consisting of ten subjects as treatment group and another ten as control. Sample treatment of saliva was taken before *wudu* and after *salat* five times in a day.

“Unstimulated saliva was collected for five minutes in a container to calculate salivary flow rate and pH level, while cortisol level was calculated using Elisa Kit with λ 540 nm at the Integrated Research Laboratory of Dentistry UGM,” she said.

From the tests they obtained the average pH level of treatment by 7,8 and 7,75 for pH control. The number indicates that wudu can increase pH level.

Additionally, they also argued the calm and relax experienced by a person after performing *wudu* and *salat* can increase the parasympathetic nerves so the cortisol level within normal level can improve saliva production that is aqueous with normal acidity (pH).

The study, added Layung, is a development of previous studies. However, it is different because the students integrated a set of five time prayers in one day at a time.

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