

# Hubungan Kadar PM10 dalam Rumah, Lingkungan Fisik Rumah dan Karakteristik Balita dengan Penyakit Gangguan Saluran Pernapasan Balita di Wilayah Puskesmas Pangkalan Kerinci Kabupaten Pelalawan Propinsi Riau Tahun 2008 = Relationship between PM10 Rate at House, House Physical Environment and Characteristic of Children Under Five Years Old with Respiration Problem Illness Occurrence at Primary Health Care of Pangkalan Kerinci, Riau Province in 2008

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## Abstrak

Respiration illness has some different symptoms basically is caused of irritation, failure of transparent mucociliari, more rekresi lender and respiration stricture. Children under five years old at Primary Heath Care of Pangkalan Kerinci in Pelalawan District risk of respiration problem and based on result of annual report at Primary Health Care, respiration trouble illness is the first of ten illnesses at this area. It is because of most public spend 90 % their time in room (house). Therefore research is pointed by the way of looking for relationship between PMN rate at house, house physical environment factor and children under five years old characteristic which related to respiration problem occurrence becoming a reason. WHO estimated that there were 400-500 millions people who faced air pollution problem of variation room including headache, head cold, drought red lane, drought coughs, eye irritation, skin irritation, influenza, breathless and tuberculosis.

This research purpose to know prevalence between respiration problem illness among children under five years old, relationship of PMN rate at house, house physical environment factor (10 variables) and children under five years old characteristic (5 variables) with respiration problem illness occurrence among children under five years old, and looking for factor which is most dominance effect of respiration problem illness among children under five years old at Primary Health Care of Pangkalan Kerinci, Pelalawan District in Riau Province, time period of Measurement appliance which is used to measure PM", rate at house consists of

Haz Dust Sampler, EPAM S000 model, temperature by thennometer, dampness by hygrometer, illumination by luxmeter, and appliance which is used to get primary data of children under five years old characteristic by questionnaire and checklist.

This research used a cross sectional design which participating population of 615 Head of Family (KK) by sample number of 261 children under five years old, where data was collected at the same time of PMN, rate, house physic environment and children under five years old characteristic and there were not respiration problem illness occurrence among children under five years old.

Based on research result which has been done it was indicated that: 1).

Prevalence of children under five years old who faced of respiration problem illness

was 78,2 % \_ 2). Children under five years old house with PMN rate which did not fulfill requirement was 55,6 %, 3). There is no meaning difference of PM", rate at house (p value = 0,393) with respiration problem among children under five years old. 4). Habit of children under five years old out of house has a meaning difference of respiration problem illness occurrence among children under five years old by p-value = 0,007 and OR = 2,59 (95 % CI: 1,333-5,083). Children under five years old who are out of house have risk of respiration problem illness 2,59 times compared with children under five years old are out of house for long time. 5). Factor which is most dominance influencing respiration problem illness occurrence among children under five years old are usage of fuel for cooking and children under five years old who are out of house. Children under five years old who are out of house have risk of respiration problem illness 2,59 times compared with children under five years old who are at house for long time, and also usage of fuel for cooking which became smoke has risk 2,32 times of respiration problem illness compared with usage of fuel for cooking which did not become smoke (gas and electricity). 6). Probability of respiration problem illness occurrence among children under five years old where they used fuel which will become smoke at their house and children under five years old who have habit out of house 83,5 %. 7). Children under five years old who used fuel for cooking which became smoke (wood, charcoal and kerosene) and many activities of children under five years old out of house have probability of respiration problem illness occurrence 1,5 times bigger than children under five years old which used fuel for cooking which did not become smoke (gas and electric) and many activities of children under five years old out of house.