

Impact of Second-Hand Smoke Exposure with Hypertension Status Among Housewives Aged 40-55 Years at Rural Areas

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Abstract

Introduction. As the leading environmental risk factor for cardiovascular diseases, national health survey reported more than 50% housewives are second-hand smokers. Many studies concluded that active smoking has been established as a risk factor for hypertension. However, to our knowledge, epidemiological evidence regarding the relationship between status of second-hand smoker and case of hypertension has not been summarized.

Objective. To understand relationship between status of second-hand smoker with case/disease of hypertension in housewives aged 40-55 years at rural area in Dusun Gondang Desa Randuagung Kecamatan Singosari Kabupaten Malang.

Methods. Analytic observational epidemiological study with cross-sectional design, using status of second-hand smoker as a risk factor for hypertension. Population are housewives aged 40-55 years Dusun Gondang Desa Randuagung Kecamatan Singosari Kabupaten Malang. Menopause, history of antihypertensive medication, or pregnant subjects were excluded. Then, we randomized total population to get 66 subjects using *Simple Random Sampling*. Data were obtained from free-guided interview about exposure to tobacco smoke inside the house and basal blood pressure measurement using standardized sphygmomanometer.

Results. From 66 subjects, 29 (43,9%) aged 40-44 years, 13 (19,7%) aged 45-49 years, and 24 (36,4%) aged 50-55 years. Total subjects who were exposed to tobacco smoke or second-hand smoker were 36 (54,54%), and number of hypertension are 33 (50,00%) among total subjects. Number of hypertension among second-hand smokers group were significantly higher ($p < 0,0001$). Compared with non-exposed subjects, the RRs (95% CI) across second-hand smoker were 4,667 (2,057-10,585).

Conclusion. Status of second-hand smoker is one of the risk factor for hypertension. Future research with prospective cohort study, bigger, and more heterogeneous population are needed to understand further about status of second-hand smoker with case of hypertension.

Keywords: Hypertension; Second-hand Smoker; Tar; Nicotine