

EPIDEMIOLOGI LANJUTAN

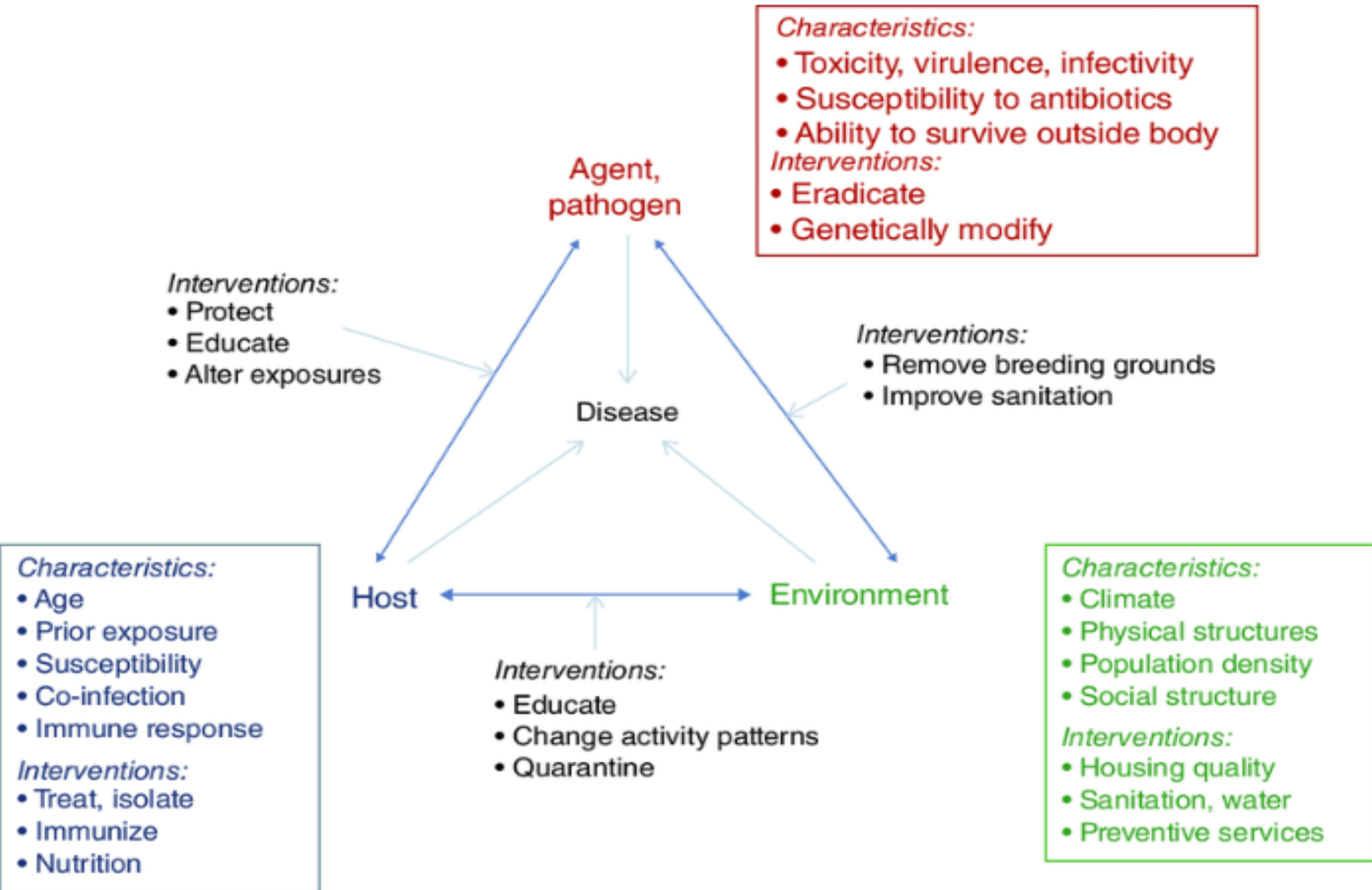
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Aplikasi Epidemiologi

Models of Disease Causation

- Germ theory
- **Epidemiological triad**
- **BEINGS theory**
- **Web of causation**
- **Wheel theory**

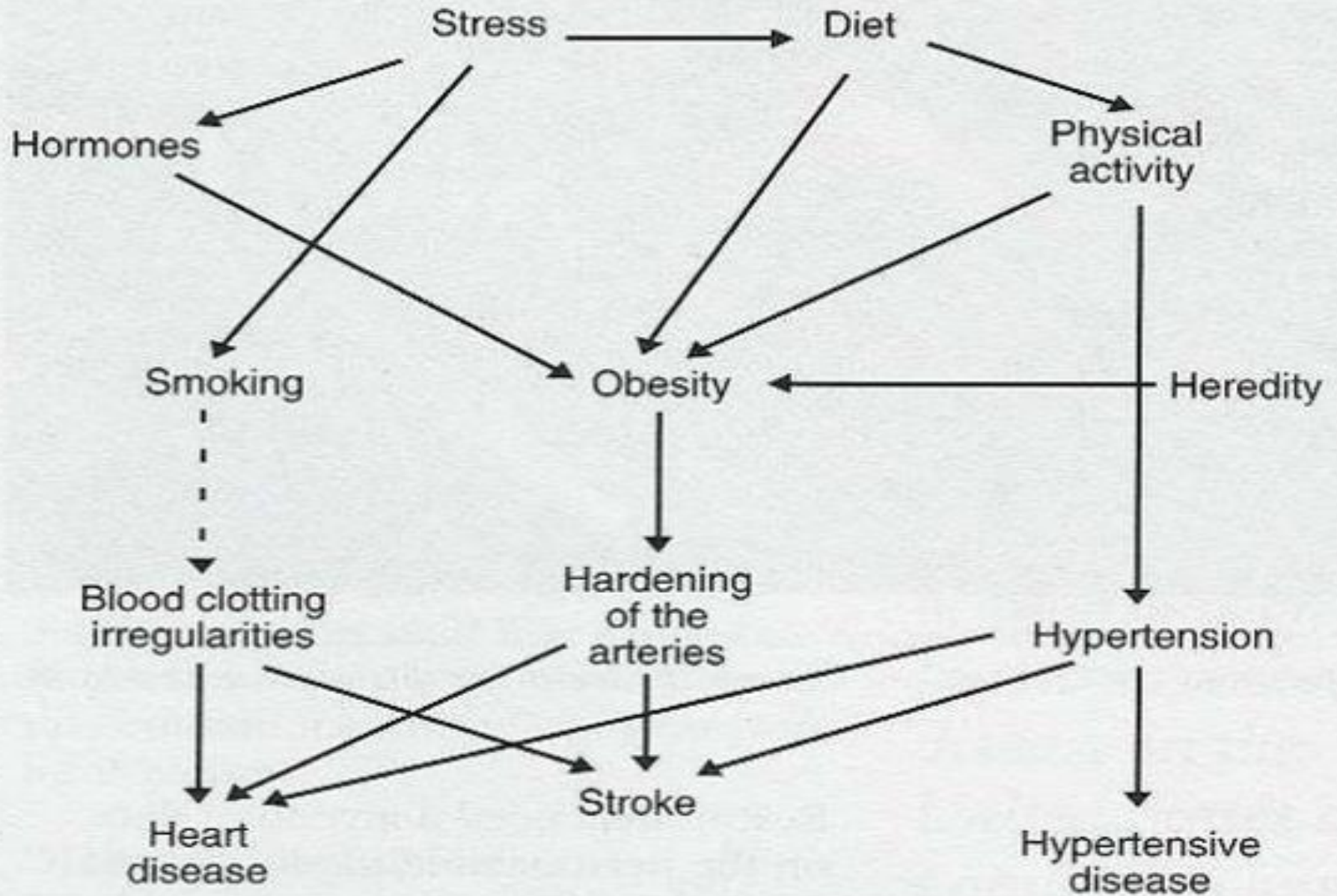
Epidemiological Triad



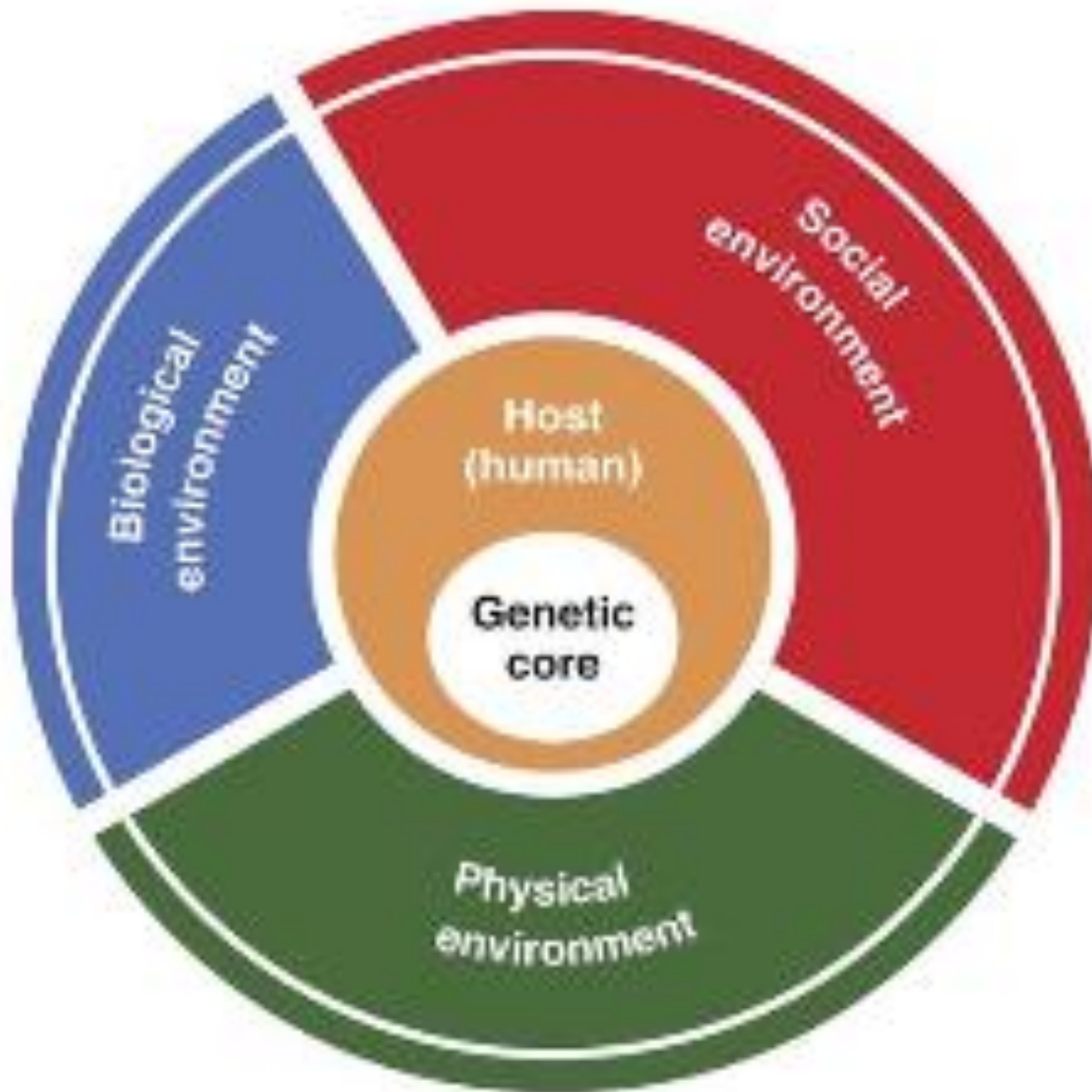
BEINGS Theory

- **B**iological factors innate in a human being
- **B**ehavioural factors concerned with individual lifestyles
- **E**nvironmental factors as physical, chemical and biological aspects of environment
- **I**mmunological factors
- **N**utritional factors
- **G**enetic factors
- **S**ocial factors
- **S**piritual factors
- **S**ervice factors

Web of Causation



Wheel Theory



Epidemiologi Genetik

- *The study of the role of genes and their interaction with environmental factors in the occurrence of disease in human populations.*
- *The branch of genetic epidemiology is still quite young, although the parents of that (epidemiology and genetics) have rather long history.*
- *The objectives of epidemiological studies in genetic science are to determine the risks related to allelic variants of candidate genes, to map more accurately regions of the genome for which there is evidence of linkage to disease susceptibility, and to contribute cases to a genome-wide search for susceptibility gene*

Parental history of atopic disease: Disease pattern and risk of pediatric atopy in offspring

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Background: Family history is an important risk factor for atopic disease. However, most studies assess only limited information on family history. Because atopic disease can exhibit transient or persistent patterns, it may be useful to assess information on patterns of disease within families. This approach has been applied in other diseases, such as cancer, to discriminate between predominately inherited versus environmentally caused (sporadic) cases.

Objective: In a cohort of children who were followed from birth until age 6 to 7 years, we examined the relationship between parental onset (ie, childhood and adulthood) and duration of atopic disease (ie, persistent disease) and the risk of pediatric atopic disease. Our hypothesis was that different parental disease patterns would be important to pediatric risk of disease.

Methods: Data from 476 families in the ongoing Childhood Allergy Study in Detroit, Mich, were analyzed by using logistic regression. We examined the association between parental patterns of disease and disease onset in their children.

Abbreviation used

aOR: Adjusted odds ratio

Family history is an important risk factor for atopic disease, including atopic dermatitis, allergic rhinitis, and atopic asthma.¹ The strong positive association between family history and risk of atopy is persistent across studies of adults and children regardless of study design (cross-sectional, longitudinal) or study location. The current standard for reporting family history of atopic disease (ie, hay fever, asthma, atopic dermatitis) is by self-report or with 1 family member reporting for the entire family. Commonly used questionnaires (ie, American Thoracic Society's Children's questionnaire and the International

The prevalence of and risk factors for atopy in early childhood: A whole population birth cohort study

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Objectives: A birth cohort was followed-up to age 4 years to record the development of allergic disorders and to study the influence of genetic and environmental factors.

Methods: Information on family history and environmental factors was obtained at birth, and serum cord IgE was measured. At age 4 years, 1218 children were reviewed.

Results: By age 4 years, 27% of the children had symptoms of allergic disease. Period prevalence of asthma increased from 8.7% in infancy to 14.9% at 4 years. Family history of atopy was the single most important risk factor for atopy in children. Sibling atopy was a stronger predictor of clinical disease than maternal or paternal atopy, whereas paternal atopy, male sex, and high cord IgE were significant for the development of allergen sensitization. Children of asthmatic mothers were three times more likely to have asthma (odds ratio [OR]: 3.0, 95% confidence interval [CI]: 1.6-5.8) and rhinitis (OR: 2.9, CI: 1.1-7.4). Formula feeding before 3 months of age predisposed to asthma at age 4 years (OR: 1.8, CI: 1.2-2.6). The effect of maternal smoking on childhood wheeze seen at 1 and 2 years was lost by age 4, except for a subgroup with negative skin test responses (nonatopic asthma). Less than half (46%) of the infantile wheezers were still wheezing at 4 years of age.

Abbreviation used

S-E: Socioeconomic

redity and maternal environment are not known. A search for reliable genetic markers of atopy has so far been inconclusive.¹⁰ Studies of environmental factors remain critical because they help in the determination of effective intervention measures. The influence of environmental factors such as month of birth,^{11, 12} method of feeding,^{4, 8, 13, 14} passive smoking,^{15, 16} and exposure to household pets^{4, 17} has been studied in some detail. However, the complex interplay of these and other factors requires further research.

In 1989, a whole population birth cohort was recruited on the Isle of Wight to assess the impact of heredity and environment on the development of allergic disorders and allergen sensitization. A review of these children at

Epidemiologi Kesling

- *The study of the effect on human health of physical, biologic, and chemical factors in the external environment.*
- *By examining specific populations or communities exposed to different ambient environments, environmental epidemiology seeks to clarify the relation between physical, biologic, and chemical factors and human health.*

PAPARAN ASAP DALAM RUMAH, HEWAN PELIHARAAN, LINGKUNGAN TEMPAT TINGGAL DAN SOSIAL EKONOMI DENGAN KEJADIAN ASMA BRONKIAL PADA ANAK

ASSOCIATION BETWEEN EXPOSURE TO SMOKE IN THE HOUSE, PETS, LIVING ENVIRONMENT AND SOCIAL ECONOMIC CONDITION AND THE PREVALENCE OF BRONCHIAL ASTHMA IN CHILDREN

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ABSTRACT

Background: World Health Organization (WHO) estimates that 100 of 150 million world population suffer from asthma and the number increases 180,000 people a year. The prevalence of bronchial asthma at District of Boyolali is increasing over years. The prevalence was 1.1% in 2005; 1.5% in 2006; 1.5% in 2007 and 2.55% in 2008.

Kejadian Infeksi Saluran Pernapasan Akut pada Pekerja Pabrik

Acute Respiratory Infection Incidence among Factory Workers

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Abstrak

Infeksi saluran pernapasan akut (ISPA) yang merupakan masalah kesehatan masyarakat di Indonesia biasa menyerang anak usia di bawah usia lima tahun (balita), tetapi dapat menyerang kelompok usia produktif. Penelitian ini bertujuan untuk mengetahui hubungan lingkungan rumah dengan kejadian ISPA pada pekerja pabrik di Kecamatan Rungkut Surabaya. Penelitian ini menggunakan desain studi kasus kontrol dengan populasi pekerja pabrik. Kasus adalah penderita ISPA dan kontrol adalah yang tidak terkena ISPA berdasarkan diagnosis klinis. Pengumpulan data dilakukan dengan wawancara terstruktur menggunakan kuesioner. Hasil analisis multivariat menunjukkan kepadatan hunian ruang tidur (nilai $p =$

ture (p value = 0,003; OR = 14,978), room ventilation (p value = 0,001; OR = 19,892), length of stay (p value = 0,006; OR = 9,587), and smoking habits (p value = 0,000; OR = 45,901) associated significantly with ARI. The dominant factor influencing ARI was smoking habits and room ventilation. It's suggested to improve house sanitation and to stop smoking.

Key words: House sanitation, ventilation, acute respiratory infection, factory workers

Pendahuluan

Infeksi saluran pernapasan akut (ISPA) merupakan

Terima Kasih