

ABSTRAK

John Lado (00000012979)

PENCEGAHAN INDIKASI *SICK BUILDING SYNDROME* PADA RUMAH SUSUN SEDERHANA SEWA DENGAN PENDEKATAN KONSEP *BIOPHILIC DESIGN*

(XVII+150 halaman: 133 gambar; 15 tabel; 10 lampiran)

Rusunawa merupakan bentuk kebijakan pemerintah untuk menjawab kebutuhan tempat tinggal bagi masyarakat berpenghasilan rendah. Rusunawa cenderung memiliki tingkat kepadatan penduduk yang tinggi. Rusunawa yang memiliki intensitas penduduk tinggi sangat rentan terhadap gejala *sick building syndrome*. *Sick building syndrome* adalah gangguan kesehatan akut dan psikis yang dialami oleh seseorang yang beraktifitas di dalam sebuah bangunan. Gejala *sick building syndrome* lebih banyak dialami pengguna ruang yang beraktifitas di dalam bangunan tertutup dari pada di sebuah ruang semi-terbuka. Salah satu konsep desain yang dapat mencegah terjadinya *sick building syndrome* adalah *biophilic design*. Agar perencanaan rusunawa dapat menerapkan konsep *biophilic design* dengan upaya mencegah indikasi *sick building syndrome*, maka penelitian ini akan meneliti apa indikator dari pola *biophilic design* yang dapat mencegah indikasi gejala *sick building syndrome* pada rumah susun? Apa faktor dan indikator *sick building syndrome* pada unit dan blok hunian rumah susun sederhana sewa berdasarkan studi kasus? Bagaimana penerapan pola *biophilic design* pada rumah susun sederhana sewa?

Pengumpulan data penelitian ini dilakukan melalui studi literatur dan studi jurnal. Studi literatur mengkompilasi teori mengenai rumah susun sederhana, gejala *sick building syndrome*, serta konsep *biophilic design*. Studi literatur menyimpulkan indikator dari pola *biophilic design* yang dapat mencegah terjadinya *sick building syndrome* pada unit dan blok hunian rumah susun. Objek studi yang terpilih adalah Rusunawa Jatinegara Barat. Pengambilan data mengenai Rusunawa Jatinegara Barat dilakukan melalui data-data sekunder. Analisis kondisi ruang pada unit dan blok hunian Rusunawa Jatinegara Barat dilakukan berdasarkan data yang tertera pada studi jurnal. Melalui analisis objek studi, diketahui apa faktor dan indikator *sick building syndrome* pada unit dan blok rusunawa. Rekomendasi desain unit dan blok rusunawa dengan pendekatan *biophilic design* diberikan berdasarkan kesimpulan studi literatur dan hasil analisis objek studi melalui data studi jurnal.

Desain perancangan berangkat dari penyusunan program ruang dalam unit, orientasi blok, penataan unit terhadap orientasi blok, program ruang pada blok hunian, dan penataan program ruang pada tapak rusunawa. Pola *biophilic design* yang diterapkan pada perancangan untuk mencegah indikasi *sick building syndrome* adalah *visual connection with nature, thermal and airflow variability, dynamic and diffuse light, biomorphic forms and patterns, material connection with nature, prospect, dan refuge*.

Kata kunci: Rumah Susun, Rusunawa, *Sick Building Syndrome*, *Biophilic design*.

ABSTRACT

John Lado (00000012979)

PREVENTING INDICATION OF SICK BUILDING SYNDROME ON FLAT RENTAL APARTMENTS THROUGH BIOPHILIC DESIGN APPROACH

(XVII+150 pages: 133 images; 15 tables; 10 attachments)

Flat rental apartments (rusunawa) are government's respond to the need of living spaces primarily towards low-income citizens. Rusunawa has high tendencies of having high population density residents. Rusunawa with high population density are highly bound to experience sick building syndrome. Sick building syndrome is a situation in which users experience biological and psychological health issues as they do activities within a building. Sick building syndrome tends to occur more often in enclosed buildings than in opened ones. One of the design concepts that is suggested to be incorporated in order to prevent the occurrence of sick building syndrome is biophilic design. To ensure the incorporation of biophilic design with the purpose of preventing sick building syndrome in rusunawa design plans, therefore this research will study "what are the indicators of biophilic design patterns that could prevent the indications of sick building syndrome in vertical housing? What are the factors and indicators of sick building syndrome in residential units and blocks of rusunawa based on case study? How can biophilic design be implemented on the design plans of a rusunawa?"

The data collection of this research is done through literature and journal studies. Literature study compiles the theories of rusunawa, sick building syndrome, and biophilic design concept. Literature study concludes the indicators of biophilic design patterns that are capable of preventing the occurrence of sick building syndrome in residential units and blocks of rusunawa. The chosen object of research is Rusunawa Jatinegara Barat. The data collections of this rusunawa are secondary. Space condition analysis is being done to the residential units and blocks of Rusunawa Jatinegara Barat based on the secondary data. Based on the analysis, the factors and indicators of sick building syndrome in residential units and blocks are known. Residential units and blocks design recommendations are given along with the implementation of biophilic design subject to the conclusions of literature studies, journal studies, and the object of research.

The design process initiates from units internal programming, units placement on block orientation, programming of blocks, and site plan programming. The implemented patterns of biophilic design in prevention of sick building syndrome are visual connection with nature, thermal and airflow variability, dynamic and diffuse light, biomorphic forms and patterns, material connection with nature, prospect, dan refuge.

Keywords: Vertical Housing, Rusunawa, Sick Building Syndrome, Biophilic design.