ANALISIS HUBUNGAN PERILAKU OPERASIONAL BERISIKO DAN KUALITAS TIDUR PELAUT UNTUK MENGURANGI TINGKAT KECELAKAAN KAPAL LAUT

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ABSTRAK

Indonesia sebagai negara kepulauan dengan ribuan jalur pelayaran menghadapi tantangan serius dalam aspek keselamatan laut. Data KNKT dan IMO menunjukkan bahwa sebagian besar kecelakaan kapal disebabkan oleh faktor manusia, seperti kelelahan, kurang tidur, dan perilaku operasional berisiko. Penelitian ini bertujuan untuk menganalisis hubungan antara kualitas tidur dan perilaku operasional berisiko terhadap kecelakaan kapal laut. Penelitian menggunakan metode kuantitatif dengan pendekatan eksperimental melalui simulasi pelayaran dalam dua skenario (kondisi normal dan kondisi distraksi), melibatkan 30 pelaut berlisensi ANT-III yang mengoperasikan kapal penumpang 500 GT. Instrumen yang digunakan adalah kuesioner Pittsburgh Sleep Quality Index (PSQI) dan Driving Behavior Questionnaire (DBQ), dengan analisis data menggunakan Structural Equation Modeling – Partial Least Squares (SEM-PLS). Hasil penelitian menunjukkan bahwa kualitas tidur memiliki pengaruh langsung yang signifikan terhadap kecelakaan kapal dan perilaku operasional berisiko. Perilaku operasional berisiko juga terbukti menjadi faktor dominan dalam peningkatan kecelakaan, terutama dalam kondisi distraksi. Dengan demikian, peningkatan kualitas tidur dan pengendalian perilaku berisiko sangat penting sebagai strategi pencegahan kecelakaan maritim. Penelitian ini memberikan rekomendasi praktis berupa pelatihan higiene tidur, manajemen distraksi, serta penguatan budaya keselamatan kerja bagi pelaut.

Kata kunci: kualitas tidur, perilaku operasional berisiko, kecelakaan kapal laut, pelaut, SEM-PLS.

ANALYSIS OF THE RELATIONSHIP BETWEEN RISKY OPERATIONAL BEHAVIOR AND THE QUALITY OF SEAFARERS SLEEP TO REDUCE THE INCIDENCE OF MARITIME ACCIDENTS

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ABSTRACT

Indonesia, as an archipelagic country with thousands of shipping lanes, faces serious challenges in terms of maritime safety. Data from the National Transportation Safety Committee (KNKT) and the International Maritime Organization (IMO) show that most ship accidents are caused by human factors, such as fatigue, lack of sleep, and risky operational behavior. This study aims to analyze the relationship between sleep quality and risky operational behavior in relation to maritime accidents. The study employs a quantitative method with an experimental approach through navigation simulations in two scenarios (normal conditions and distraction conditions), involving 30 licensed ANT-III seafarers operating a 500 GT passenger vessel. The instruments used were the Pittsburgh Sleep Quality Index (PSQI) questionnaire and the Driving Behavior Questionnaire (DBQ), with data analysis using Structural Equation Modeling – Partial Least Squares (SEM-PLS). The results of the study indicate that sleep quality has a significant direct influence on ship accidents and risky operational behavior. Risk-taking operational behavior was also found to be a dominant factor in increased accidents, particularly under distraction conditions. Therefore, improving sleep quality and controlling risk-taking behavior are crucial as strategies for preventing maritime accidents. This study provides practical recommendations, including sleep hygiene training, distraction management, and strengthening a safety-conscious work culture among seafarers.

Keywords: *Sleep Quality, Risky Operational Behavior, Maritime Accidents, Seafarers, SEM-PLS.*