

## ABSTRAK

**Latar Belakang:** Prevalensi *overweight* dan obesitas pada pekerja industri pertambangan terus meningkat dan menjadi faktor risiko berbagai penyakit metabolik. Industri Pertambangan X telah menerapkan *Food Traffic Lights System* (FTLS) untuk membantu pekerja memilih makanan yang lebih sehat melalui label warna pada makanan dan minuman. Penelitian ini bertujuan untuk mengetahui hubungan status BMI, pengetahuan, dan persepsi berdasarkan pendekatan HBM dengan perilaku penerapan FTLS pada pekerja di Industri Pertambangan X.

**Metode:** Penelitian ini menggunakan desain *cross-sectional* pada 189 pekerja Departemen *Dewatering Plant and Pipeline* di Industri Pertambangan X dengan teknik *convenience sampling*. Data dikumpulkan menggunakan kuesioner daring dan dianalisis menggunakan uji *chi-square* serta regresi logistik berganda metode *backward* untuk mengidentifikasi determinan independen perilaku penerapan FTLS setelah mengontrol variabel perancu.

**Hasil:** Sebanyak 62,5% responden memiliki status BMI di atas normal dan 54,0% memiliki perilaku penerapan FTLS yang baik. Status BMI ( $p=0,315$ ) dan pengetahuan FTLS ( $p=0,552$ ) tidak menunjukkan hubungan bermakna dengan perilaku penerapan FTLS. Pada analisis multivariat, persepsi kerentanan ( $aOR=2,24$ ; 95% CI: 1,45–5,91;  $p=0,003$ ), *self-efficacy* ( $aOR=2,01$ ; 95% CI: 0,94–4,31;  $p=0,072$ ), dan *cues to action* ( $aOR=3,15$ ; 95% CI: 1,59–6,26;  $p=0,001$ ) merupakan determinan independen yang bermakna, dengan *cues to action* sebagai faktor paling dominan.

**Kesimpulan:** Status BMI dan pengetahuan mengenai FTLS tidak terbukti berhubungan secara langsung dengan perilaku penerapan FTLS pada pekerja di Industri Pertambangan X. Perilaku penerapan FTLS ditentukan secara independen oleh persepsi kerentanan terhadap risiko penyakit metabolik, keyakinan diri (*self-efficacy*) dalam memilih makanan sehat, dan keberadaan stimulus lingkungan kerja (*cues to action*). Temuan ini menunjukkan bahwa keberhasilan implementasi FTLS di lingkungan kerja pertambangan memerlukan pendekatan promosi kesehatan yang komprehensif, tidak hanya berfokus pada peningkatan pengetahuan, tetapi juga pada penguatan persepsi risiko personal, peningkatan *self-efficacy* pekerja, serta optimalisasi stimulus lingkungan kerja secara berkelanjutan.

**Kata kunci:** *food traffic lights system*, *health belief model*, pekerja pertambangan, perilaku makan sehat

## ABSTRACT

**Background:** *The prevalence of overweight and obesity among workers in the mining industry continues to increase and has become a risk factor for various metabolic diseases. Mining Industry X has implemented the Food Traffic Lights System (FTLS) to assist workers in choosing healthier foods through color-coded labels on food and beverages. This study aimed to determine the association between BMI status, knowledge, and perceptions based on the Health Belief Model (HBM) approach with FTLS implementation behavior among workers in Mining Industry X.*

**Methods:** *This study used a cross-sectional design involving 189 workers from the Dewatering Plant and Pipeline Department at Mining Industry X, selected using a convenience sampling technique. Data were collected through an online questionnaire and analyzed using chi-square tests and multiple logistic regression with the backward method to identify independent determinants of FTLS implementation behavior after controlling for confounding variables.*

**Results:** *A total of 62.5% of respondents had an above-normal BMI status, and 54.0% demonstrated good FTLS implementation behavior. BMI status ( $p=0.315$ ) and FTLS knowledge ( $p=0.552$ ) showed no significant association with FTLS implementation behavior. In the multivariate analysis, perceived susceptibility ( $aOR=2.93$ ; 95% CI: 1.45–5.91;  $p=0.003$ ), self-efficacy ( $aOR=2.01$ ; 95% CI: 0.94–4.31;  $p=0.072$ ), and cues to action ( $aOR=3.15$ ; 95% CI: 1.59–6.26;  $p=0.001$ ) were identified as significant independent determinants, with cues to action emerging as the most dominant factor.*

**Conclusion:** *BMI status and FTLS knowledge were not directly associated with FTLS implementation behavior among workers in Mining Industry X. FTLS implementation behavior was independently determined by perceived susceptibility to metabolic disease risk, self-efficacy in making healthy food choices, and the presence of workplace environmental stimuli (cues to action). These findings suggest that successful FTLS implementation in a mining workplace requires a comprehensive health promotion approach that extends beyond knowledge enhancement to encompass the reinforcement of personal risk perception, improvement of workers' self-efficacy, and sustained optimization of workplace environmental cues.*

**Keywords:** *food traffic lights system, health belief model, mining workers, healthy eating behavior*