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## **A Critical Review of Epidemiologic Evidence for Work Related Musculoskeletal Disorders of Low Back**

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### **Abstract**

Musculoskeletal disorders in particular low back pain, is one of the most common occupational health problems in Total E&P Indonesia. Multiple factors including mechanical and psychosocial are among possible determinants of interest.

In order to prevent MSD, the risk factors in the workplace that contribute to the development of low back pain had been studied. Resulted 5 categories; working environment, psychosocial, bio - mechanic, occupational and socio-demographic.

This research had been conducted in eight months (June 2007- February 2008) with the permanent employee as the subject. Research conducted into two group, MSD surveillance from mechanical aspects and from psychological aspect.

Epidemiological analysis consists of three stages:

Conclusion of risk factors and determinants

Quantity of risk factor

Epidemiologic analysis.

The objective of the critical review is to deeply explore the risk factors, and sharing idea to manage them. MSD surveillance, prevalence studies, mechanical and psychogenic back pain, and other risk factors and predictors model, had been studied in order for problem mitigation.

### **RESEARCH RESULT**

1. LBP Risk to Gender: man has better protection than woman. (OR 0,276)
2. Working on site, has higher risk to LBP than office. (OR 7.586)
3. Comfort working place and spatial provide better protection to LBP. (OR 0,466)
4. Bending over midline body have significants relation to LBP's prevalens (OR 1,586)
5. Lifting over shoulder have significant relation to LBP's prevalence (OR 1.571)
6. Sitting position group, has higher risk to LBP. (OR 3.184)

Comparing LBP prevalence found in this rsearch with data aboved, LBP prevalence in TI are far below. This lower prevalence it may come from existing 'recovery time' between tasks among Total Indonesia workers.

### **CONCLUSIONS**

The researches found that there are some existing working condition, posture, gesture, and psychological aspects as risk factor of LBP.

LBP prevalence in Total E&P Indonesia is lower (4.7%) compare to LBP prevalence in petroleum industry (22%) may come from existing 'recovery time' between tasks among Total Indonesia workers.