

## ABSTRACT

Musculoskeletal sikh is sikh or discomfortness that used to happen at part of skeletal muscle. One of the type of work that prone to this musculoskeletal sikh is traditional stone breaker that have to deal with the static work by doing some repetitive motions such as breaking up the stone using the hammer and also lifting the stone and sands from the river to the work place. The aim of this research is to identify the factors related to the musculoskeletal sikh on traditional stone breaker.

This study was an observational descriptive with cross sectional as the design of study. The respondents were all of the traditional stone breaker that worked along the river of Kalisetail in Genteng sub district Banyuwangi. Variables that studied were internal factors (age, sex, length of work and nutritional status), the external factors (weight of load frequency of lifting, work position, work period) and its relation with musculoskeletal sikh. To know of correlation between variables the writer used the Chi Square Test and contingency coefficient (C) to determine the correlation variables.

The result showed us that most of the respondents were aged over 40 years old, most of them were male, and they worked for 8 hours per day. Majority of them had a good nutritional status. From the lifting index value, most of them were not work in ergonomic way. They lifted weight for more than 25 kg with frequency varies from 1-4 times a day, and they have worked more than 5 years in average. Most of the respondent complained a persistent sikh and mostly it's in their back. The analysis proved that there was a correlation with the medium correlation between the level of sikh with the job duration ( $p = 0,028$ ,  $C = 0.270$ ), nutritional status ( $p = 0,046$ ,  $C = 0.306$ ), and work period ( $p = 0,002$ ,  $C = 0.345$ ).

It can be concluded that working as traditional stone breaker in Kalisetail river Genteng sub district Banyuwangi may risk the worker from having the musculoskeletal sikh. Therefore it is suggested to the worker to manage their work. They should not to lift more than 32 kg (70 pounds), and the frequency of lifting supposed to be once in every 2-5 minutes for approximately 2 hours per day. They also suggested to take a rest at least 7 minutes every 125 minutes they breaking up the stone and every 83.3 minutes they do lifting.

Key words : musculoskeletal sikh, internal and external factors

## ABSTRAK

Keluhan muskuloskeletal adalah keluhan yang dialami pada bagian-bagian otot skeletal. Salah satu pekerja yang rentan terkena keluhan muskuloskeletal adalah pekerja pemecah batu tradisional yang kegiatan utamanya adalah terus-menerus memukul batu serta melakukan pengangkutan (batu dan pasir) dari sungai ke lokasi kerja. Tujuan dari penelitian ini adalah ingin mengetahui faktor yang berhubungan dengan keluhan muskuloskeletal pada pekerja pemecah batu tradisional.

Penelitian ini adalah penelitian observasional deskriptif dengan rancangan crosssectional. Responden adalah seluruh pekerja pemecah batu tradisional di bantaran sungai Kalisetail Kecamatan Genteng Banyuwangi. Variabel yang diteliti adalah faktor internal (umur, jenis kelamin, lama kerja, status gizi), faktor eksternal (berat beban, frekuensi pengangkutan, posisi kerja, masa kerja) terhadap keluhan muskuloskeletal. Untuk mengetahui adanya hubungan antar variabel digunakan uji *Chi Square test* dan *Contingency Coefficient (C)* untuk mengukur kuat hubungannya.

Hasil penelitian menunjukkan bahwa sebagian besar responden berusia lebih dari 40 tahun, didominasi kaum laki-laki, mayoritas bekerja selama 8 jam per hari dan berstatus gizi baik. Dari nilai *Lifting index* sebagian besar bekerja secara tidak ergonomis, mengangkat beban lebih dari 25 kg dengan frekuensi pengangkutan 1-4 kali per hari dan telah bekerja lebih dari 5 tahun. Sebagian besar responden mengalami keluhan di tingkat *persistent*, anggota tubuh yang paling banyak dikeluhkan adalah punggung. Hasil penelitian membuktikan bahwa adanya hubungan dengan tingkat hubungan sedang antara tingkat keluhan dengan lama kerja ( $p = 0,028$ ,  $C = 0,270$ ), status gizi ( $p = 0,046$ ,  $C = 0,306$ ), masa kerja ( $p = 0,002$ ,  $C = 0,345$ ).

Dapat disimpulkan bahwa pekerjaan sebagai pemecah batu tradisional di bantaran sungai Kalisetail Kecamatan Genteng Banyuwangi berisiko terkena keluhan muskuloskeletal. Untuk itu pekerja sebaiknya melakukan pengaturan berat beban yaitu tidak lebih dari 32 kg (70 pounds), pengaturan frekuensi pengangkutan menjadi 1 kali angkatan tiap 2-5 menit selama  $\pm$  2 jam per hari dan istirahat selama 7 menit tiap 125 menit pemukulan batu serta tiap 83,3 menit melakukan pengangkutan.

Kata kunci : Muskuloskeletal, faktor internal dan eksternal