

# LAMPIRAN

## Lampiran I

Surat Balasan Penerimaan Penelitian (Skripsi)



**PT. SANDING SUMBER ANUGRAH**  
GENERAL CONTRACTOR AND SUPPLIER



Nomor : SSA-078/ADMDOC/SK/VIII/2020

Cikarang, 18 Agustus 2020

Perihal : Surat Pernyataan dan Izin Penelitian

Kepada Yth.  
Dekan Fakultas Ilmu-ilmu Kesehatan  
Universitas Esa Unggul  
Di Tempat

Dengan hormat,

Sehubungan dengan menindak lanjuti permohonan saudara untuk melaksanakan penelitian (skripsi) dengan nomor : 44/FIKES/KESMAS/UEU/II/2020 tanggal 12 Februari 2020 perihal permohonan izin tempat penelitian, pengambilan data perusahaan kami dalam rangka penyusunan skripsi mahasiswi atas nama :

**Nama : Aprisalma Indah Pratiwi**

**NIM : 20160301132**

dengan judul **“Faktor-Faktor yang Berhubungan dengan Keluhan Musculoskeletal Disorders (MSDs) pada Pekerja Bagian Pipe Fitter di PT Sanding Sumber Anugrah Proyek PT SPV Purwakarta Tahun 2020”**

Perlu kami sampaikan beberapa hal sebagai berikut :

1. Pada prinsipnya kami menerima dan mengizinkan pelaksanaan penelitian tersebut di tempat kami.
2. Izin melakukan penelitian diberikan semata-mata untuk keperluan akademik.
3. Waktu pengambilan data dilakukan sesuai kesepakatan bersama dalam jangka waktu pelaksanaan di salah satu proyek PT. Sanding Sumber Anugrah di PT. SPV Purwakarta.

Demikian surat balasan ini saya sampaikan, atas perhatian dan kerjasamanya saya ucapkan terima kasih.

PT. Sanding Sumber Anugrah

**H. Asep Kadarisman**

HRD Manager

**PT. SANDING SUMBER ANUGRAH**  
GENERAL CONTRACTOR

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*Lampiran II*

Dokumentasi saat penelitian di PT Sanding Sumber Anugrah Proyek PT SPV Purwakarta



### Lampiran III

#### Output SPSS

#### 1. OUTPUT ANALISIS UNIVARIAT

|       |                                      | <u>USIA</u> |         |               |                    |
|-------|--------------------------------------|-------------|---------|---------------|--------------------|
|       |                                      | Frequency   | Percent | Valid Percent | Cumulative Percent |
| Valid | Berisiko, jika usia $\geq$ 30 tahun  | 35          | 70.0    | 70.0          | 70.0               |
|       | Tidak berisiko, jika usia < 30 tahun | 15          | 30.0    | 30.0          | 100.0              |
|       | Total                                | 50          | 100.0   | 100.0         |                    |

|       |               | <u>KEBIASAAN MEROKOK</u> |         |               |                    |
|-------|---------------|--------------------------|---------|---------------|--------------------|
|       |               | Frequency                | Percent | Valid Percent | Cumulative Percent |
| Valid | Merokok       | 41                       | 82.0    | 82.0          | 82.0               |
|       | Tidak Merokok | 9                        | 18.0    | 18.0          | 100.0              |
|       | Total         | 50                       | 100.0   | 100.0         |                    |

|       |  | <u>POSTUR KERJA JANGGAL</u> |         |               |                    |
|-------|--|-----------------------------|---------|---------------|--------------------|
|       |  | Frequency                   | Percent | Valid Percent | Cumulative Percent |
| Valid | Berisiko, jika skor akhir REBA 4-15      | 40                          | 80.0    | 80.0          | 80.0               |
|       | Tidak berisiko, jika skor akhir REBA 1-3 | 10                          | 20.0    | 20.0          | 100.0              |
|       | Total                                    | 50                          | 100.0   | 100.0         |                    |

|       |  | <u>GERAKAN BERULANG</u> |         |               |                    |
|-------|--|-------------------------|---------|---------------|--------------------|
|       |  | Frequency               | Percent | Valid Percent | Cumulative Percent |
| Valid | Berisiko, jika frekuensi $\geq$ 10 gerakan/menit | 37                      | 74.0    | 74.0          | 74.0               |
|       | Tidak berisiko, jika frekuensi <10 gerakan/menit | 13                      | 26.0    | 26.0          | 100.0              |
|       | Total  | 50                      | 100.0   | 100.0         |                    |

### **DURASI KERJA**

|       |                                     | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|-------------------------------------|-----------|---------|---------------|--------------------|
| Valid | Berisiko, jika $\geq 2$ jam/hari    | 42        | 84.0    | 84.0          | 84.0               |
|       | Tidak berisiko, jika $< 2$ jam/hari | 8         | 16.0    | 16.0          | 100.0              |
|       | Total                               | 50        | 100.0   | 100.0         |                    |

### **BEBAN KERJA**

|       |  | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|--|-----------|---------|---------------|--------------------|
| Valid | Berisiko, jika 101-150 denyut/menit      | 30        | 60.0    | 60.0          | 60.0               |
|       | Tidak berisiko, jika 75-100 denyut/menit | 20        | 40.0    | 40.0          | 100.0              |
|       | Total                                    | 50        | 100.0   | 100.0         |                    |

### **MASA KERJA**

|       |                | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|----------------|-----------|---------|---------------|--------------------|
| Valid | Berisiko       | 28        | 56.0    | 56.0          | 56.0               |
|       | Tidak Berisiko | 22        | 44.0    | 44.0          | 100.0              |
|       | Total          | 50        | 100.0   | 100.0         |                    |

### **KELUHAN MUSCULOSKELETAL DISORDERS (MSDS)**

|       |                | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|----------------|-----------|---------|---------------|--------------------|
| Valid | Berisiko       | 37        | 74.0    | 74.0          | 74.0               |
|       | Tidak berisiko | 13        | 26.0    | 26.0          | 100.0              |
|       | Total          | 50        | 100.0   | 100.0         |                    |

## 2. OUTPUT ANALISIS BIVARIAT

### USIA \* KELUHAN MUSCULOSKELETAL DISORDERS (MSDS) CROSSTABULATION

|                |                                      | Keluhan <i>Musculoskeletal Disorders</i><br>(MSDs) |                |        |        |
|----------------|--------------------------------------|--|----------------|--------|--------|
|                |                                      | Berisiko   | Tidak berisiko | Total  |        |
| Usia Responden | Berisiko, jika usia $\geq$ 30 tahun  | Count  | 30             | 5      | 35     |
|                |                                      | Expected Count                                     | 25.9           | 9.1    | 35.0   |
|                |                                      | % within Usia Responden                            | 85.7%          | 14.3%  | 100.0% |
|                | Tidak berisiko, jika usia < 30 tahun | Count  | 7              | 8      | 15     |
|                |                                      | Expected Count                                     | 11.1           | 3.9    | 15.0   |
|                |                                      | % within Usia Responden                            | 46.7%          | 53.3%  | 100.0% |
| Total          | Count                                | 37   | 13             | 50     |        |
|                | Expected Count                       | 37.0   | 13.0           | 50.0   |        |
|                | % within Usia Responden              | 74.0%  | 26.0%          | 100.0% |        |

### **Chi-Square Tests**

|                                    | Value              | df | Asymptotic<br>Significance (2-<br>sided) | Exact Sig. (2-<br>sided) | Exact Sig. (1-<br>sided) |
|------------------------------------|--------------------|----|--|--------------------------|--------------------------|
| Pearson Chi-Square                 | 8.321 <sup>a</sup> | 1  | .004                                     |                          |                          |
| Continuity Correction <sup>b</sup> | 6.415              | 1  | .011                                     |                          |                          |
| Likelihood Ratio                   | 7.870              | 1  | .005                                     |                          |                          |
| Fisher's Exact Test                |                    |    |  | .011                     | .007                     |
| Linear-by-Linear Association       | 8.155              | 1  | .004                                     |                          |                          |
| N of Valid Cases                   | 50                 |    |  |                          |                          |

a. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 3.90.

b. Computed only for a 2x2 table

### Risk Estimate

|  | Value | 95% Confidence Interval |        |
|--|-------|-------------------------|--------|
|  |       | Lower                   | Upper  |
| Odds Ratio for Usia Responden (Berisiko, jika usia $\geq$ 30 tahun / Tidak berisiko, jika usia $<$ 30 tahun) | 6.857 | 1.712                   | 27.463 |
| For cohort Keluhan Musculoskeletal Disorders (MSDs) = Berisiko   | 1.837 | 1.052                   | 3.208  |
| For cohort Keluhan Musculoskeletal Disorders (MSDs) = Tidak berisiko   | .268  | .105                    | .685   |
| N of Valid Cases   | 50    |                         |        |

### KEBIASAAN MEROKOK \* KELUHAN MUSCULOSKELETAL DISORDERS (MSDS) CROSSTABULATION

|                   |                            | Keluhan Musculoskeletal Disorders (MSDs) |                | Total  |        |
|-------------------|----------------------------|--|----------------|--------|--------|
|                   |                            | Berisiko                                 | Tidak berisiko |        |        |
| Kebiasaan Merokok | Merokok                    | Count                                    | 30             | 11     | 41     |
|                   |                            | Expected Count                           | 30.3           | 10.7   | 41.0   |
|                   |                            | % within Kebiasaan Merokok               | 73.2%          | 26.8%  | 100.0% |
|                   | Tidak Merokok              | Count                                    | 7              | 2      | 9      |
|                   |                            | Expected Count                           | 6.7            | 2.3    | 9.0    |
|                   |                            | % within Kebiasaan Merokok               | 77.8%          | 22.2%  | 100.0% |
| Total             | Count                      | 37                                       | 13             | 50     |        |
|                   | Expected Count             | 37.0                                     | 13.0           | 50.0   |        |
|                   | % within Kebiasaan Merokok | 74.0%                                    | 26.0%          | 100.0% |        |

### Chi-Square Tests

|                                    | Value             | df | Asymptotic Significance (2-sided) | Exact Sig. (2-sided) | Exact Sig. (1-sided) |
|------------------------------------|-------------------|----|-----------------------------------|----------------------|----------------------|
| Pearson Chi-Square                 | .081 <sup>a</sup> | 1  | .775                              |                      |                      |
| Continuity Correction <sup>b</sup> | .000              | 1  | 1.000                             |                      |                      |
| Likelihood Ratio                   | .084              | 1  | .772                              |                      |                      |
| Fisher's Exact Test                |                   |    |                                   | 1.000                | .571                 |
| Linear-by-Linear Association       | .080              | 1  | .778                              |                      |                      |
| N of Valid Cases                   | 50                |    |                                   |                      |                      |

a. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 2.34.

b. Computed only for a 2x2 table

### Risk Estimate

|  | Value | 95% Confidence Interval |       |
|--|-------|-------------------------|-------|
|  |       | Lower                   | Upper |
| Odds Ratio for Kebiasaan Merokok (Merokok / Tidak Merokok)           | .779  | .140                    | 4.337 |
| For cohort Keluhan Musculoskeletal Disorders (MSDs) = Berisiko       | .941  | .634                    | 1.397 |
| For cohort Keluhan Musculoskeletal Disorders (MSDs) = Tidak berisiko | 1.207 | .322                    | 4.532 |
| N of Valid Cases   | 50    |                         |       |

### POSTUR KERJA JANGGAL \* KELUHAN MUSCULOSKELETAL DISORDERS (MSDS) CROSSTABULATION

|  |  | Keluhan Musculoskeletal Disorders (MSDs) |                |       |        |
|--|--|--|----------------|-------|--------|
|  |  | Berisiko                                 | Tidak berisiko | Total |        |
| Postur Kerja Janggal                     | Berisiko, jika skor akhir REBA 4-15      | Count                                    | 36             | 4     | 40     |
|  |  | Expected Count                           | 29.6           | 10.4  | 40.0   |
|  |  | % within Postur Kerja Janggal            | 90.0%          | 10.0% | 100.0% |
| Tidak berisiko, jika skor akhir REBA 1-3 | Tidak berisiko, jika skor akhir REBA 1-3 | Count                                    | 1              | 9     | 10     |
|  |  | Expected Count                           | 7.4            | 2.6   | 10.0   |
|  |  | % within Postur Kerja Janggal            | 10.0%          | 90.0% | 100.0% |
| Total                                    | Total                                    | Count                                    | 37             | 13    | 50     |
|  |  | Expected Count                           | 37.0           | 13.0  | 50.0   |
|  |  | % within Postur Kerja Janggal            | 74.0%          | 26.0% | 100.0% |

### Chi-Square Tests

|                                    | Value               | df | Asymptotic Significance (2-sided) | Exact Sig. (2-sided) | Exact Sig. (1-sided) |
|------------------------------------|---------------------|----|-----------------------------------|----------------------|----------------------|
| Pearson Chi-Square                 | 26.611 <sup>a</sup> | 1  | .000                              |                      |                      |
| Continuity Correction <sup>b</sup> | 22.616              | 1  | .000                              |                      |                      |
| Likelihood Ratio                   | 24.797              | 1  | .000                              |                      |                      |
| Fisher's Exact Test                |                     |    |                                   | .000                 | .000                 |
| Linear-by-Linear Association       | 26.079              | 1  | .000                              |                      |                      |
| N of Valid Cases                   | 50                  |    |                                   |                      |                      |

a. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 2.60.

b. Computed only for a 2x2 table



### Risk Estimate

|  | Value  | 95% Confidence Interval |         |
|--|--------|-------------------------|---------|
|  |        | Lower                   | Upper   |
| Odds Ratio for Postur Kerja Janggal (Berisiko, jika skor akhir REBA 4-15 / Tidak berisiko, jika skor akhir REBA 1-3) | 81.000 | 8.041                   | 815.898 |
| For cohort Keluhan Musculoskeletal Disorders (MSDs) = Berisiko   | 9.000  | 1.398                   | 57.944  |
| For cohort Keluhan Musculoskeletal Disorders (MSDs) = Tidak berisiko   | .111   | .043                    | .288    |
| N of Valid Cases   | 50     |                         |         |

### GERAKAN BERULANG \* KELUHAN MUSCULOSKELETAL DISORDERS (MSDS) CROSTABULATION

|  |  | Keluhan Musculoskeletal Disorders (MSDs) |                |       |        |
|--|--|--|----------------|-------|--------|
|  |  | Berisiko                                 | Tidak berisiko | Total |        |
| Gerakan Berulang                                 | Berisiko, jika frekuensi $\geq 10$ gerakan/menit | Count                                    | 30             | 7     | 37     |
|  |  | Expected Count                           | 27.4           | 9.6   | 37.0   |
|  |  | % within Gerakan Berulang                | 81.1%          | 18.9% | 100.0% |
| Tidak berisiko, jika frekuensi <10 gerakan/menit | Tidak berisiko, jika frekuensi <10 gerakan/menit | Count                                    | 7              | 6     | 13     |
|  |  | Expected Count                           | 9.6            | 3.4   | 13.0   |
|  |  | % within Gerakan Berulang                | 53.8%          | 46.2% | 100.0% |
| Total  | Total  | Count                                    | 37             | 13    | 50     |
|  |  | Expected Count                           | 37.0           | 13.0  | 50.0   |
|  |  | % within Gerakan Berulang                | 74.0%          | 26.0% | 100.0% |

### Chi-Square Tests

|                                    | Value              | df | Asymptotic Significance (2-sided) | Exact Sig. (2-sided) | Exact Sig. (1-sided) |
|------------------------------------|--------------------|----|-----------------------------------|----------------------|----------------------|
| Pearson Chi-Square                 | 3.709 <sup>a</sup> | 1  | .054                              |                      |                      |
| Continuity Correction <sup>b</sup> | 2.428              | 1  | .119                              |                      |                      |
| Likelihood Ratio                   | 3.468              | 1  | .063                              |                      |                      |
| Fisher's Exact Test                |                    |    |                                   | .073                 | .063                 |
| Linear-by-Linear Association       | 3.635              | 1  | .057                              |                      |                      |
| N of Valid Cases                   | 50                 |    |                                   |                      |                      |

a. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 3.38.

b. Computed only for a 2x2 table

### Risk Estimate

|  | Value | 95% Confidence Interval |        |
|--|-------|-------------------------|--------|
|  |       | Lower                   | Upper  |
| Odds Ratio for Gerakan Berulang (Berisiko, jika frekuensi $\geq 10$ gerakan/menit / Tidak berisiko, jika frekuensi $< 10$ gerakan/menit) | 3.673 | .937                    | 14.398 |
| For cohort Keluhan Musculoskeletal Disorders (MSDs) = Berisiko   | 1.506 | .889                    | 2.550  |
| For cohort Keluhan Musculoskeletal Disorders (MSDs) = Tidak berisiko   | .410  | .169                    | .997   |
| N of Valid Cases   | 50    |                         |        |

### DURASI KERJA \* KELUHAN MUSCULOSKELETAL DISORDERS (MSDS) CROSSTABULATION

| Durasi Kerja                        |                       | Keluhan Musculoskeletal Disorders (MSDs) |                |        |
|-------------------------------------|-----------------------|--|----------------|--------|
|                                     |                       | Berisiko                                 | Tidak berisiko | Total  |
| Berisiko, jika $\geq 2$ jam/hari    | Count                 | 35                                       | 7              | 42     |
|                                     | Expected Count        | 31.1                                     | 10.9           | 42.0   |
|                                     | % within Durasi Kerja | 83.3%                                    | 16.7%          | 100.0% |
| Tidak berisiko, jika $< 2$ jam/hari | Count                 | 2  | 6              | 8      |
|                                     | Expected Count        | 5.9                                      | 2.1            | 8.0    |
|                                     | % within Durasi Kerja | 25.0%                                    | 75.0%          | 100.0% |
| Total                               | Count                 | 37                                       | 13             | 50     |
|                                     | Expected Count        | 37.0                                     | 13.0           | 50.0   |
|                                     | % within Durasi Kerja | 74.0%                                    | 26.0%          | 100.0% |

### Chi-Square Tests

|                                    | Value               | df | Asymptotic Significance (2-sided) | Exact Sig. (2-sided) | Exact Sig. (1-sided) |
|------------------------------------|---------------------|----|-----------------------------------|----------------------|----------------------|
| Pearson Chi-Square                 | 11.885 <sup>a</sup> | 1  | .001                              |                      |                      |
| Continuity Correction <sup>b</sup> | 9.046               | 1  | .003                              |                      |                      |
| Likelihood Ratio                   | 10.461              | 1  | .001                              |                      |                      |
| Fisher's Exact Test                |                     |    |                                   | .002                 | .002                 |
| Linear-by-Linear Association       | 11.647              | 1  | .001                              |                      |                      |
| N of Valid Cases                   | 50                  |    |                                   |                      |                      |

a. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 2.08.

b. Computed only for a 2x2 table

### Risk Estimate

|  | Value  | 95% Confidence Interval |        |
|--|--------|-------------------------|--------|
|  |        | Lower                   | Upper  |
| Odds Ratio for Durasi Kerja (Berisiko, jika $\geq 2$ jam/hari / Tidak berisiko, jika $< 2$ jam/hari) | 15.000 | 2.494                   | 90.229 |
| For cohort Keluhan Musculoskeletal Disorders (MSDs) = Berisiko                                       | 3.333  | .996                    | 11.154 |
| For cohort Keluhan Musculoskeletal Disorders (MSDs) = Tidak berisiko                                 | .222   | .101                    | .488   |
| N of Valid Cases   | 50     |                         |        |

### **BEBAN KERJA \* KELUHAN MUSCULOSKELETAL DISORDERS (MSDS) CROSSTABULATION**

|  |  | Keluhan Musculoskeletal Disorders (MSDs) |                |       |        |
|--|--|--|----------------|-------|--------|
|  |  | Berisiko                                 | Tidak berisiko | Total |        |
| Beban Kerja                              | Berisiko, jika 101-150 denyut/menit      | Count                                    | 26             | 4     | 30     |
|  |  | Expected Count                           | 22.2           | 7.8   | 30.0   |
|  |  | % within Beban Kerja                     | 86.7%          | 13.3% | 100.0% |
| Tidak berisiko, jika 75-100 denyut/menit | Tidak berisiko, jika 75-100 denyut/menit | Count                                    | 11             | 9     | 20     |
|  |  | Expected Count                           | 14.8           | 5.2   | 20.0   |
|  |  | % within Beban Kerja                     | 55.0%          | 45.0% | 100.0% |
| Total                                    | Total                                    | Count                                    | 37             | 13    | 50     |
|  |  | Expected Count                           | 37.0           | 13.0  | 50.0   |
|  |  | % within Beban Kerja                     | 74.0%          | 26.0% | 100.0% |

### Chi-Square Tests

|                                    | Value              | df | Asymptotic Significance (2-sided) | Exact Sig. (2-sided) | Exact Sig. (1-sided) |
|------------------------------------|--------------------|----|-----------------------------------|----------------------|----------------------|
| Pearson Chi-Square                 | 6.254 <sup>a</sup> | 1  | .012                              |                      |                      |
| Continuity Correction <sup>b</sup> | 4.717              | 1  | .030                              |                      |                      |
| Likelihood Ratio                   | 6.220              | 1  | .013                              |                      |                      |
| Fisher's Exact Test                |                    |    |                                   | .021                 | .015                 |
| Linear-by-Linear Association       | 6.129              | 1  | .013                              |                      |                      |
| N of Valid Cases                   | 50                 |    |                                   |                      |                      |

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 5.20.

b. Computed only for a 2x2 table

### Risk Estimate

|   | Value | 95% Confidence Interval |        |
|---|-------|-------------------------|--------|
|   |       | Lower                   | Upper  |
| Odds Ratio for Beban Kerja (Berisiko, jika 101-150 denyut/menit / Tidak berisiko, jika 75-100 denyut/menit) | 5.318 | 1.348                   | 20.984 |
| For cohort Keluhan Musculoskeletal Disorders (MSDs) = Berisiko  | 1.576 | 1.035                   | 2.400  |
| For cohort Keluhan Musculoskeletal Disorders (MSDs) = Tidak berisiko  | .296  | .105                    | .832   |
| N of Valid Cases  | 50    |                         |        |

### MASA KERJA \* KELUHAN MUSCULOSKELETAL DISORDERS (MSDS) CROSSTABULATION

|            |                     | Keluhan Musculoskeletal Disorders (MSDs) |                |        |        |
|------------|---------------------|--|----------------|--------|--------|
|            |                     | Berisiko                                 | Tidak berisiko | Total  |        |
| Masa Kerja | Berisiko            | Count                                    | 24             | 4      | 28     |
|            |                     | Expected Count                           | 20.7           | 7.3    | 28.0   |
|            |                     | % within Masa Kerja                      | 85.7%          | 14.3%  | 100.0% |
|            | Tidak Berisiko      | Count                                    | 13             | 9      | 22     |
|            |                     | Expected Count                           | 16.3           | 5.7    | 22.0   |
|            |                     | % within Masa Kerja                      | 59.1%          | 40.9%  | 100.0% |
| Total      | Count               | 37                                       | 13             | 50     |        |
|            | Expected Count      | 37.0                                     | 13.0           | 50.0   |        |
|            | % within Masa Kerja | 74.0%                                    | 26.0%          | 100.0% |        |

### Chi-Square Tests

|                                    | Value              | df | Asymptotic Significance (2-sided) | Exact Sig. (2-sided) | Exact Sig. (1-sided) |
|------------------------------------|--------------------|----|-----------------------------------|----------------------|----------------------|
| Pearson Chi-Square                 | 4.539 <sup>a</sup> | 1  | .033                              |                      |                      |
| Continuity Correction <sup>b</sup> | 3.260              | 1  | .071                              |                      |                      |
| Likelihood Ratio                   | 4.572              | 1  | .032                              |                      |                      |
| Fisher's Exact Test                |                    |    |                                   | .051                 | .035                 |
| Linear-by-Linear Association       | 4.448              | 1  | .035                              |                      |                      |
| N of Valid Cases                   | 50                 |    |                                   |                      |                      |

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 5.72.

b. Computed only for a 2x2 table

### Risk Estimate

|  | Value | 95% Confidence Interval |        |
|--|-------|-------------------------|--------|
|  |       | Lower                   | Upper  |
| Odds Ratio for Masa Kerja (Berisiko / Tidak Berisiko)                | 4.154 | 1.069                   | 16.143 |
| For cohort Keluhan Musculoskeletal Disorders (MSDs) = Berisiko       | 1.451 | .993                    | 2.119  |
| For cohort Keluhan Musculoskeletal Disorders (MSDs) = Tidak berisiko | .349  | .124                    | .985   |
| N of Valid Cases   | 50    |                         |        |

### 3. OUTPUT STRATIFIKASI

#### KEBIASAAN MEROKOK \* KELUHAN MUSCULOSKELETAL \* BEBAN KERJA CROSSTABULATION

| Beban Kerja    |                   |                                  | Keluhan Musculoskeletal          |                |        |        |
|----------------|-------------------|----------------------------------|----------------------------------|----------------|--------|--------|
|                |                   |                                  | Berisiko                         | Tidak Berisiko | Total  |        |
| Berisiko       | Kebiasaan Merokok | Merokok                          | Count                            | 20             | 3      | 23     |
|                |                   |                                  | % within Kebiasaan Merokok       | 87.0%          | 13.0%  | 100.0% |
|                |                   |                                  | % within Keluhan Musculoskeletal | 76.9%          | 100.0% | 79.3%  |
|                |                   | Tidak merokok                    | Count                            | 6              | 0      | 6      |
|                |                   | % within Kebiasaan Merokok       | 100.0%                           | 0.0%           | 100.0% |        |
|                |                   | % within Keluhan Musculoskeletal | 23.1%                            | 0.0%           | 20.7%  |        |
|                | Total             |                                  | Count                            | 26             | 3      | 29     |
|                |                   |                                  | % within Kebiasaan Merokok       | 89.7%          | 10.3%  | 100.0% |
|                |                   |                                  | % within Keluhan Musculoskeletal | 100.0%         | 100.0% | 100.0% |
| Tidak Berisiko | Kebiasaan Merokok | Merokok                          | Count                            | 4              | 7      | 11     |
|                |                   |                                  | % within Kebiasaan Merokok       | 36.4%          | 63.6%  | 100.0% |
|                |                   |                                  | % within Keluhan Musculoskeletal | 66.7%          | 46.7%  | 52.4%  |
|                |                   | Tidak merokok                    | Count                            | 2              | 8      | 10     |
|                |                   | % within Kebiasaan Merokok       | 20.0%                            | 80.0%          | 100.0% |        |
|                |                   | % within Keluhan Musculoskeletal | 33.3%                            | 53.3%          | 47.6%  |        |

|       |                   |                                  |                                  |        |        |        |
|-------|-------------------|----------------------------------|----------------------------------|--------|--------|--------|
| Total |                   |                                  | Count                            | 6      | 15     | 21     |
|       |                   |                                  | % within Kebiasaan Merokok       | 28.6%  | 71.4%  | 100.0% |
|       |                   |                                  | % within Keluhan Musculoskeletal | 100.0% | 100.0% | 100.0% |
| Total | Kebiasaan Merokok | Merokok                          | Count                            | 24     | 10     | 34     |
|       |                   |                                  | % within Kebiasaan Merokok       | 70.6%  | 29.4%  | 100.0% |
|       |                   |                                  | % within Keluhan Musculoskeletal | 75.0%  | 55.6%  | 68.0%  |
|       | Tidak merokok     | Count                            | 8                                | 8      | 16     |        |
|       |                   | % within Kebiasaan Merokok       | 50.0%                            | 50.0%  | 100.0% |        |
|       |                   | % within Keluhan Musculoskeletal | 25.0%                            | 44.4%  | 32.0%  |        |
| Total |                   |                                  | Count                            | 32     | 18     | 50     |
|       |                   |                                  | % within Kebiasaan Merokok       | 64.0%  | 36.0%  | 100.0% |
|       |                   |                                  | % within Keluhan Musculoskeletal | 100.0% | 100.0% | 100.0% |

### GERAKAN BERULANG \* KELUHAN MUSCULOSKELETAL \* BEBAN KERJA CROSSTABULATION

| Beban Kerja    |                  |                                  | Keluhan Musculoskeletal          |                |        |        |
|----------------|------------------|----------------------------------|----------------------------------|----------------|--------|--------|
|                |                  |                                  | Berisiko                         | Tidak Berisiko | Total  |        |
| Berisiko       | Gerakan Berulang | Berisiko                         | Count                            | 25             | 3      | 28     |
|                |                  |                                  | % within Gerakan Berulang        | 89.3%          | 10.7%  | 100.0% |
|                |                  |                                  | % within Keluhan Musculoskeletal | 96.2%          | 100.0% | 96.6%  |
|                | Tidak Berisiko   | Count                            | 1                                | 0              | 1      |        |
|                |                  | % within Gerakan Berulang        | 100.0%                           | 0.0%           | 100.0% |        |
|                |                  | % within Keluhan Musculoskeletal | 3.8%                             | 0.0%           | 3.4%   |        |
| Total          |                  |                                  | Count                            | 26             | 3      | 29     |
|                |                  |                                  | % within Gerakan Berulang        | 89.7%          | 10.3%  | 100.0% |
|                |                  |                                  | % within Keluhan Musculoskeletal | 100.0%         | 100.0% | 100.0% |
| Tidak Berisiko | Gerakan Berulang | Berisiko                         | Count                            | 3              | 6      | 9      |
|                |                  |                                  | % within Gerakan Berulang        | 33.3%          | 66.7%  | 100.0% |
|                |                  |                                  | % within Keluhan Musculoskeletal | 50.0%          | 40.0%  | 42.9%  |
|                |                  |                                  |                                  |                |        |        |

|       |                  |                |                                  |        |        |        |
|-------|------------------|----------------|----------------------------------|--------|--------|--------|
|       |                  | Tidak Berisiko | Count                            | 3      | 9      | 12     |
|       |                  |                | % within Gerakan Berulang        | 25.0%  | 75.0%  | 100.0% |
|       |                  |                | % within Keluhan Musculoskeletal | 50.0%  | 60.0%  | 57.1%  |
|       | Total            |                | Count                            | 6      | 15     | 21     |
|       |                  |                | % within Gerakan Berulang        | 28.6%  | 71.4%  | 100.0% |
|       |                  |                | % within Keluhan Musculoskeletal | 100.0% | 100.0% | 100.0% |
| Total | Gerakan Berulang | Berisiko       | Count                            | 28     | 9      | 37     |
|       |                  |                | % within Gerakan Berulang        | 75.7%  | 24.3%  | 100.0% |
|       |                  |                | % within Keluhan Musculoskeletal | 87.5%  | 50.0%  | 74.0%  |
|       |                  | Tidak Berisiko | Count                            | 4      | 9      | 13     |
|       |                  |                | % within Gerakan Berulang        | 30.8%  | 69.2%  | 100.0% |
|       |                  |                | % within Keluhan Musculoskeletal | 12.5%  | 50.0%  | 26.0%  |
|       | Total            |                | Count                            | 32     | 18     | 50     |
|       |                  |                | % within Gerakan Berulang        | 64.0%  | 36.0%  | 100.0% |
|       |                  |                | % within Keluhan Musculoskeletal | 100.0% | 100.0% | 100.0% |

### MASA KERJA \* KELUHAN MUSCULOSKELETAL \* DURASI KERJA CROSSTABULATION

| Durasi Kerja   |            |          | Keluhan Musculoskeletal          |                |        |        |
|----------------|------------|----------|----------------------------------|----------------|--------|--------|
|                |            |          | Berisiko                         | Tidak Berisiko | Total  |        |
| Berisiko       | Masa Kerja | Berisiko | Count                            | 15             | 4      | 19     |
|                |            |          | % within Masa Kerja              | 78.9%          | 21.1%  | 100.0% |
|                |            |          | % within Keluhan Musculoskeletal | 46.9%          | 22.2%  | 38.0%  |
| Tidak Berisiko |            | Berisiko | Count                            | 17             | 14     | 31     |
|                |            |          | % within Masa Kerja              | 54.8%          | 45.2%  | 100.0% |
|                |            |          | % within Keluhan Musculoskeletal | 53.1%          | 77.8%  | 62.0%  |
| Total          |            |          | Count                            | 32             | 18     | 50     |
|                |            |          | % within Masa Kerja              | 64.0%          | 36.0%  | 100.0% |
|                |            |          | % within Keluhan Musculoskeletal | 100.0%         | 100.0% | 100.0% |

|       |            |                |                                  |        |        |        |
|-------|------------|----------------|----------------------------------|--------|--------|--------|
| Total | Masa Kerja | Berisiko       | Count                            | 15     | 4      | 19     |
|       |            |                | % within Masa Kerja              | 78.9%  | 21.1%  | 100.0% |
|       |            |                | % within Keluhan Musculoskeletal | 46.9%  | 22.2%  | 38.0%  |
|       |            | Tidak Berisiko | Count                            | 17     | 14     | 31     |
|       |            |                | % within Masa Kerja              | 54.8%  | 45.2%  | 100.0% |
|       |            |                | % within Keluhan Musculoskeletal | 53.1%  | 77.8%  | 62.0%  |
| Total |            |                | Count                            | 32     | 18     | 50     |
|       |            |                | % within Masa Kerja              | 64.0%  | 36.0%  | 100.0% |
|       |            |                | % within Keluhan Musculoskeletal | 100.0% | 100.0% | 100.0% |

#### 4. OUTPUT ANALISIS MULTIVARIAT

##### A. PEMODELAN

###### USIA

|                     |                | B      | S.E. | Wald   | df | Sig. | Exp(B) | 95% C.I. for EXP(B) |        |
|---------------------|----------------|--------|------|--------|----|------|--------|---------------------|--------|
|                     |                |        |      |        |    |      |        | Lower               | Upper  |
| Step 1 <sup>a</sup> | Usia Responden | 1.925  | .708 | 7.396  | 1  | .007 | 6.857  | 1.712               | 27.463 |
|                     | Constant       | -1.792 | .483 | 13.759 | 1  | .000 | .167   |                     |        |

a. Variable(s) entered on step 1: Usia Responden.

Usia = 0,007 (MASUK MODEL)

###### KEBIASAAN MEROKOK

|                     |                   | B      | S.E. | Wald  | df | Sig. | Exp(B) | 95% C.I. for EXP(B) |       |
|---------------------|-------------------|--------|------|-------|----|------|--------|---------------------|-------|
|                     |                   |        |      |       |    |      |        | Lower               | Upper |
| Step 1 <sup>a</sup> | Kebiasaan Merokok | -.249  | .876 | .081  | 1  | .776 | .779   | .140                | 4.337 |
|                     | Constant          | -1.003 | .352 | 8.102 | 1  | .004 | .367   |                     |       |

a. Variable(s) entered on step 1: Kebiasaan Merokok.

Kebiasaan Merokok = 0,776 (TIDAK MASUK MODEL)

###### POSTUR KERJA JANGGAL

|                     |                      | B      | S.E.  | Wald   | df | Sig. | Exp(B) | 95% C.I. for EXP(B) |         |
|---------------------|----------------------|--------|-------|--------|----|------|--------|---------------------|---------|
|                     |                      |        |       |        |    |      |        | Lower               | Upper   |
| Step 1 <sup>a</sup> | Postur Kerja Janggal | 4.394  | 1.179 | 13.904 | 1  | .000 | 81.000 | 8.041               | 815.898 |
|                     | Constant             | -2.197 | .527  | 17.380 | 1  | .000 | .111   |                     |         |

a. Variable(s) entered on step 1: Postur Kerja Janggal.

Postur Kerja Janggal = 0,000 (MASUK MODEL)



### GERAKAN BERULANG

|                     |                  | B      | S.E. | Wald   | df | Sig. | Exp(B) | 95% C.I.for EXP(B) |        |
|---------------------|------------------|--------|------|--------|----|------|--------|--------------------|--------|
|                     |                  |        |      |        |    |      |        | Lower              | Upper  |
| Step 1 <sup>a</sup> | Gerakan Berulang | 1.301  | .697 | 3.485  | 1  | .062 | 3.673  | .937               | 14.398 |
|                     | Constant         | -1.455 | .420 | 12.020 | 1  | .001 | .233   |                    |        |

a. Variable(s) entered on step 1: Gerakan Berulang.

Gerakan Berulang = 0,062 (TIDAK MASUK MODEL)

### DURASI KERJA

|                     |              | B      | S.E. | Wald   | df | Sig. | Exp(B) | 95% C.I.for EXP(B) |        |
|---------------------|--------------|--------|------|--------|----|------|--------|--------------------|--------|
|                     |              |        |      |        |    |      |        | Lower              | Upper  |
| Step 1 <sup>a</sup> | Durasi Kerja | 2.708  | .915 | 8.750  | 1  | .003 | 15.000 | 2.494              | 90.229 |
|                     | Constant     | -1.609 | .414 | 15.110 | 1  | .000 | .200   |                    |        |

a. Variable(s) entered on step 1: Durasi Kerja.

Durasi Kerja = 0,003 (MASUK MODEL)

### BEBAN KERJA

|                     |             | B      | S.E. | Wald   | df | Sig. | Exp(B) | 95% C.I.for EXP(B) |        |
|---------------------|-------------|--------|------|--------|----|------|--------|--------------------|--------|
|                     |             |        |      |        |    |      |        | Lower              | Upper  |
| Step 1 <sup>a</sup> | Beban Kerja | 1.671  | .700 | 5.694  | 1  | .017 | 5.318  | 1.348              | 20.984 |
|                     | Constant    | -1.872 | .537 | 12.146 | 1  | .000 | .154   |                    |        |

a. Variable(s) entered on step 1: Beban Kerja.

Beban Kerja = 0,017 (MASUK MODEL)

### MASA KERJA

|                     |            | B      | S.E. | Wald   | df | Sig. | Exp(B) | 95% C.I.for EXP(B) |        |
|---------------------|------------|--------|------|--------|----|------|--------|--------------------|--------|
|                     |            |        |      |        |    |      |        | Lower              | Upper  |
| Step 1 <sup>a</sup> | Masa Kerja | 1.424  | .693 | 4.227  | 1  | .040 | 4.154  | 1.069              | 16.143 |
|                     | Constant   | -1.792 | .540 | 11.007 | 1  | .001 | .167   |                    |        |

a. Variable(s) entered on step 1: Masa Kerja.

Masa Kerja = 0,040 (MASUK MODEL)

## **B. Model Akhir Analisis Multivariat Keluhan MSDs**

|                     |                      | B      | S.E.  | Wald   | df | Sig. | Exp(B) | 95% C.I.for EXP(B) |         |
|---------------------|----------------------|--------|-------|--------|----|------|--------|--------------------|---------|
|                     |                      |        |       |        |    |      |        | Lower              | Upper   |
| Step 1 <sup>a</sup> | Postur Kerja Janggal | 4.203  | 1.262 | 11.093 | 1  | .001 | 66.908 | 5.639              | 793.842 |
|                     | Beban Kerja          | 1.298  | 1.008 | 1.659  | 1  | .198 | 3.660  | .508               | 26.371  |
|                     | Constant             | -2.790 | .823  | 11.494 | 1  | .001 | .061   |                    |         |

a. Variable(s) entered on step 1: Postur Kerja Janggal, Beban Kerja, Masa Kerja.

Postur kerja janggal terbukti berhubungan signifikan ( $p \text{ value} = 0,001 < 0,05$ )

**Lampiran IV**

Kuesioner Penelitian Keluhan MSDs

**PERNYATAAN KESEDIAAN MENJADI RESPONDEN PENELITIAN**

Assalamu'alaikum wr. wb.

Salam Sejahtera untuk kita semua.

Dengah hormat,

Perkenalkan, nama saya Aprisalma Indah Pratiwi, Mahasiswi S1 Peminatan Kesehatan Keselamatan Kerja (K3) Program Studi Kesehatan Masyarakat Fakultas Ilmu-Ilmu Kesehatan Universitas Esa Unggul. Saya bermaksud melakukan penelitian untuk Tugas Akhir/Skripsi untuk memperoleh gelar Sarjana Kesehatan Masyarakat (SKM) yang berjudul "Faktor-Faktor yang berhubungan dengan keluhan *Musculoskeletal Disorder* (MSDs) pada Pekerja Bagian *Pipe Fitter* PT Sanding Sumber Anugrah di Proyek PT SPV Purwakarta Tahun 2020". Sehubungan dengan hal tersebut, saya memohon dengan segala kerendahan hati agar Bapak/Saudara bersedia meluangkan waktunya untuk mengisi pertanyaan berikut. Kejujuran Bapak/Saudara dalam menjawab pertanyaan sangat saya hargai. Jawaban yang Bapak/Saudara berikan saya jamin kerahasiaannya. Hasil dari pengisian kuesioner ini akan dijadikan saran bagi pihak terkait dengan objek penelitian.

Dengan ini saya menyatakan bersedia berpartisipasi menjadi narasumber penelitian:

Nama : .....


No. HP : .....

Demikian pernyataan ini dibuat dengan sesungguhnya tanpa paksaan dari siapapun. Atas bantuan dan partisipasinya Bapak/Saudara dalam mengisi kuesioner ini saya ucapkan terima kasih.

Wassalamualaikum wr. wb.

Purwakarta, ..... Agustus 2020

Peneliti

  
(Aprisalma Indah Pratiwi)

Responden

(.....)

**KUESIONER PENELITIAN**  
**FAKTOR-FAKTOR YANG BERHUBUNGAN DENGAN KELUHAN**  
**MUSCULOSKELETAL DISORDER (MSDS) PADA PEKERJA BAGIAN PIPE**  
**FITTER PT SANDING SUMBER ANUGRAH DI PROYEK PT SPV**  
**PURWAKARTA TAHUN 2020**

Oleh

Nama : Aprisalma Indah Pratiwi

NIM : 20160301132

No. Responden : .....

**A. Karakteristik Responden**

1. Nama : ..... (Nama anda akan kami rahasiakan)
2. Tanggal Lahir : ..... Usia: ..... tahun
3. Berat Badan : ..... kg (diukur oleh peneliti)
4. Tinggi Badan : ..... cm (diukur oleh peneliti)

**B. Masa Kerja**

| No. | Pertanyaan   | Jawaban   |
|-----|--|---|
| 1.  | Sudah berapa lama anda bekerja di bagian <i>Pipe Fitter</i> PT. Sanding Sumber Anugrah | ..... tahun                                       |
| 2.  | Apakah sebelumnya anda pernah bekerja dibagian yang sama pada perusahaan lain?         | a. Ya (lanjut ke soal no.3)<br>b. Tidak (selesai) |
| 3.  | Sudah berapa lama anda bekerja di bagian yang sama pada perusahaan sebelumnya?         | ..... bulan/tahun                                 |
| 4.  | Apakah pekerjaan sebelumnya mempunyai potensi bahaya terhadap otot dan tulang anda?    | a. Ya<br>b. Tidak                                 |

**C. Kebiasaan Merokok**

| No. | Pertanyaan   | Jawaban  |
|-----|--|--|
| 1.  | Apakah anda perokok?                                 | a. Ya<br>b. Tidak (langsung ke soal no.4)<br>c. Tidak pernah sama sekali (selesai) |
| 2.  | Sudah berapa lama anda merokok?                      | ..... tahun  |
| 3.  | Berapa batang rokok yang anda habiskan dalam sehari? | ..... batang   |
| 4.  | Sudah berapa lama anda berhenti merokok?             | ..... (bulan/tahun lalu)   |

#### D. Gerakan Berulang

| No. | Subunit<br><i>Pipe Fitter</i>  | Definisi   | Jumlah<br>gerakan/menit | <10 gerakan<br>/menit | ≥ 10 gerakan<br>/menit |
|-----|--|--|-------------------------|-----------------------|------------------------|
| 1.  | Fabrikasi<br>(rekayasa pipa)   | Pengukuran dan pemotongan pipa sesuai kebutuhan  |                         |                       |                        |
| 2.  | Instalasi pipa<br>(pembongkaran, penggantian, penyetelan, instalasi ulang) | Penyetelan pipa sesuai prosedur yang ada serta perbaikan dan perawatan alat-alat atau mesin-mesin produksi di industri |                         |                       |                        |
| 3.  | <i>Finishing</i>   | Membersihkan hasil pekerjaan berbahan gel resin dan <i>rock wool</i> di area kerja PT SSA di <i>site plan</i> PT SPV   |                         |                       |                        |

#### E. Durasi Kerja

| No. | Pertanyaan   | Jawaban        |
|-----|--|----------------|
| 1.  | Berapa lama anda bekerja dengan menyelesaikan suatu pekerjaan? | ..... jam/hari |

#### F. Beban Kerja

| No. | Pertanyaan  | Jawaban            |
|-----|---|--------------------|
| 1.  | Jumlah denyut nadi setelah bekerja (dihitung oleh peneliti) | ..... denyut/menit |

**A. Neck, Trunk and Leg Analysis**

**Step 1: Locate Neck Position**



Step 1a: Adjust...  
If neck is twisted: +1  
If neck is side bending: +1

**Step 2: Locate Trunk Position**



Step 2a: Adjust...  
If trunk is twisted: +1  
If trunk is side bending: +1

**Step 3: Legs**



Step 4: Look-up Posture Score in Table A  
Using values from steps 1-3 above,  
Locate score in Table A

**Step 5: Add Force/Load Score**

If load < 11 lbs.: +0  
If load 11 to 22 lbs.: +1  
If load > 22 lbs.: +2  
Adjust: if shock or rapid build up of force: add +1  
Force / Load Score

**Step 6: Score A, Find Row in Table C**

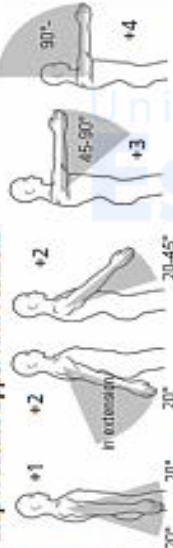
Add values from steps 4 & 5 to obtain Score A,  
Find Row in Table C.

**Scoring**

- 1 = Negligible Risk
- 2-3 = Low Risk. Change may be needed.
- 4-7 = Medium Risk. Further investigate. Change Soon.
- 8-10 = High Risk. Investigate and Implement Change
- 11+ = Very High Risk. Implement Change

**B. Arm and Wrist Analysis**

**Step 7: Locate Upper Arm Position:**



Step 7a: Adjust...  
If shoulder is raised: +1  
If upper arm is abducted: +1  
If arm is supported or person is leaning: +1

**Step 8: Locate Lower Arm Position:**



**Step 9: Locate Wrist Position:**



Step 9a: Adjust...  
If wrist is bent from midline or twisted: Add +1

**Step 10: Look-up Posture Score in Table B**

Using values from steps 7-9 above, locate score in Table B

**Step 11: Add Coupling Score**

Well fitting Handle and mid rang power grip, good: +0  
Acceptable but not ideal hand held or coupling acceptable with another body part, fair: +1  
Hand held not acceptable but possible, poor: +2  
No handles, awkward, unsafe with any body part, Unacceptable: +3

**Step 12: Score B, Find Column in Table C**

Add values from steps 10 & 11 to obtain Score B. Find column in Table C and match with Score A in row from step 6 to obtain Table C Score.

**Step 13: Activity Score**

- +1 1 or more body parts are held for longer than 1 minute (static)
- +1 Repeated small range actions (more than 4x per minute)
- +1 Action causes rapid large range changes in postures or unstable base

**Scores**

| Table A       |         | Neck    |         |         |
|---------------|---------|---------|---------|---------|
|               |         | 1       | 2       | 3       |
| Legs          | 1 2 3 4 | 1 2 3 4 | 1 2 3 4 | 1 2 3 4 |
| Trunk Posture | 1 2 3 4 | 1 2 3 4 | 1 2 3 4 | 1 2 3 4 |
| Score         | 1 2 3 4 | 1 2 3 4 | 1 2 3 4 | 1 2 3 4 |

| Table B   |         | Lower Arm   |             |             |
|-----------|---------|-------------|-------------|-------------|
|           |         | 1           | 2           | 3           |
| Upper Arm | 1 2 3 4 | 1 2 2 1 2 3 | 1 2 3 2 3 4 | 1 2 3 2 3 4 |
| Score     | 1 2 3 4 | 1 2 3 4     | 1 2 3 4     | 1 2 3 4     |

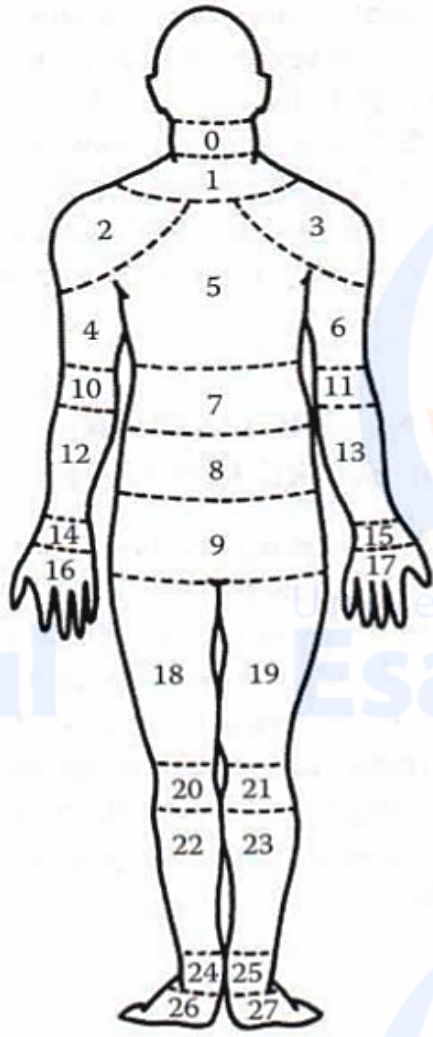
| Table C |    | Score B |    |    |    |    |    |    |    |    |    |    |    |
|---------|----|---------|----|----|----|----|----|----|----|----|----|----|----|
|         |    | 1       | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10 | 11 | 12 |
| Score A | 1  | 1       | 1  | 1  | 2  | 3  | 4  | 5  | 6  | 7  | 7  | 7  | 7  |
|         | 2  | 1       | 2  | 3  | 4  | 5  | 6  | 6  | 7  | 7  | 8  | 8  | 8  |
|         | 3  | 2       | 3  | 3  | 4  | 5  | 6  | 7  | 7  | 8  | 8  | 8  | 8  |
|         | 4  | 3       | 4  | 4  | 5  | 6  | 7  | 8  | 8  | 9  | 9  | 9  | 9  |
|         | 5  | 4       | 4  | 5  | 6  | 7  | 8  | 8  | 9  | 9  | 9  | 9  | 9  |
|         | 6  | 6       | 6  | 7  | 8  | 8  | 9  | 9  | 10 | 10 | 10 | 10 | 10 |
|         | 7  | 7       | 7  | 8  | 9  | 9  | 10 | 10 | 11 | 11 | 11 | 11 | 11 |
|         | 8  | 8       | 8  | 9  | 10 | 10 | 10 | 11 | 11 | 11 | 11 | 11 | 11 |
|         | 9  | 9       | 9  | 10 | 10 | 11 | 11 | 11 | 12 | 12 | 12 | 12 | 12 |
|         | 10 | 10      | 10 | 11 | 11 | 11 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
|         | 11 | 11      | 11 | 11 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
|         | 12 | 12      | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |

Table C Score + Activity Score = REBA Score

## H. Keluhan *Musculoskeletal Disorders* (MSDs)

### ***NORDIC BODY MAP QUESTIONNAIRE***

Anda diminta untuk menilai apa yang anda rasakan pada bagian tubuh yang ditunjukkan pada gambar. Apakah bagian tubuh yang sudah diberikan nomor tersebut tidak terasa sakit (pilih A), sedikit sakit(pilih B), sakit (pilih C) dan sangat sakit (pilih D). Pilih dengan memberikan tanda  $\surd$  pada kolom huruf pilihan anda.

| No. | Lokasi                              | Tingkat Kesakitan |   |   |   | Peta Bagian Tubuh  |
|-----|-------------------------------------|-------------------|---|---|---|--|
|     |                                     | A                 | B | C | D |  |
| 0   | Sakit / kaku pada leher atas        |                   |   |   |   |  |
| 1   | Sakit pada leher bawah              |                   |   |   |   |  |
| 2   | Sakit pada bahu kiri                |                   |   |   |   |  |
| 3   | Sakit pada bahu kanan               |                   |   |   |   |  |
| 4   | Sakit pada lengan atas kiri         |                   |   |   |   |  |
| 5   | Sakit pada punggung                 |                   |   |   |   |  |
| 6   | Sakit pada lengan atas kanan        |                   |   |   |   |  |
| 7   | Sakit pada pinggang                 |                   |   |   |   |  |
| 8   | Sakit pada pantat (buttock)         |                   |   |   |   |  |
| 9   | Sakit pada pantat (bottom)          |                   |   |   |   |  |
| 10  | Sakit pada siku kiri                |                   |   |   |   |  |
| 11  | Sakit pada siku kanan               |                   |   |   |   |  |
| 12  | Sakit pada lengan bawah kiri        |                   |   |   |   |  |
| 13  | Sakit pada lengan bawah kanan       |                   |   |   |   |  |
| 14  | Sakit pada pergelangan tangan kiri  |                   |   |   |   |  |
| 15  | Sakit pada pergelangan tangan kanan |                   |   |   |   |  |
| 16  | Sakit pada tangan kiri              |                   |   |   |   |  |
| 17  | Sakit pada tangan kanan             |                   |   |   |   |  |
| 18  | Sakit pada paha kiri                |                   |   |   |   |  |
| 19  | Sakit pada paha kanan               |                   |   |   |   |  |
| 20  | Sakit pada lutut kiri               |                   |   |   |   |  |
| 21  | Sakit pada lutut kanan              |                   |   |   |   |  |
| 22  | Sakit pada betis kiri               |                   |   |   |   |  |
| 23  | Sakit pada betis kanan              |                   |   |   |   |  |
| 24  | Sakit pada peergelangan kaki kiri   |                   |   |   |   |  |
| 25  | Sakit pada pergelangan kaki kanan   |                   |   |   |   |  |
| 26  | Sakit pada kaki kiri                |                   |   |   |   |  |
| 27  | Sakit pada kaki kanan               |                   |   |   |   |  |