Upper-extremity musculoskeletal disorders: how many cases can be prevented? Estimates from the COSALI cohort

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1. Supplementary material
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Table S1: A comparison of characteristics and working conditions at baseline between the eligible participants included in the analyses and those excluded

|                          | Included participants (n = 1246) | Excluded participants (n = 139) | P       |
|--------------------------|----------------------------------|---------------------------------|---------|
|                          | n  | %  | n  | %  |        |
| **Baseline characteristics** |    |    |    |    |        |
| Sex                      |    |    |    |    |        |
| Men                      | 734 | 58.9 | 69 | 49.6 | 0.036  |
| Women                    | 512 | 41.1 | 70 | 50.4 |        |
| Age (years)              |    |    |    |    | <0.001 |
| <35                      | 460 | 36.9 | 35 | 25.2 |        |
| 35-44                    | 451 | 36.2 | 44 | 31.7 |        |
| ≥45                      | 335 | 26.9 | 60 | 43.2 |        |
| Overweight/obesity       | 436 | 35.2 | 44 | 33.1 | 0.628  |
| Diabetes mellitus        | 13  | 1.0  | 2  | 1.4  | 0.656* |
| Rheumatoid arthritis     | 20  | 1.6  | 2  | 1.4  | 1.000* |
| Seniority in current job (years) |    |    |    |    | 0.041  |
| <1                       | 107 | 8.7  | 14 | 10.3 |        |
| 1-2                      | 196 | 15.9 | 17 | 12.5 |        |
| 3-10                     | 463 | 37.5 | 38 | 27.9 |        |
| >10                      | 470 | 38.0 | 67 | 49.3 |        |
| **Occupational class**   |    |    |    |    | <0.001 |
| Craftsmen, salesmen and managers | 0  | 0.0  | 3  | 2.2  |        |
| Professionals            | 95  | 7.6  | 6  | 4.4  |        |
| Technicians, associate professionals | 300 | 24.1 | 34 | 24.8 |        |
| Low-grade white-collar workers | 345 | 27.7 | 50 | 36.5 |        |
| Blue-collar workers      | 506 | 40.6 | 44 | 32.1 |        |
| Temporary employment     | 70  | 5.6  | 16 | 8.6  | 0.006  |
| Economic sector          |    |    |    |    | <0.001 |
| Agriculture              | 0  | 0.0  | 13 | 9.4  |        |
| Industry                 | 477 | 38.3 | 26 | 18.8 |        |
| Construction             | 63  | 5.1  | 9  | 6.5  |        |
| Trade and services       | 706 | 56.7 | 90 | 65.2 |        |

**Working conditions at baseline**
Biomechanical factors

| Factor                                                                 | Count | Mean | SD | Median | p-value |
|------------------------------------------------------------------------|-------|------|----|--------|---------|
| At least one of the six UEMSD*                                        | 139   | 11.2 | 13 | 10.5   | 0.820   |
| High perceived physical exertion (Borg RPE scale ≥13)                 | 571   | 45.8 | 72 | 54.6   | 0.056   |
| High repetitiveness of tasks (>4 hours/day)                           | 267   | 21.4 | 36 | 28.8   | 0.058   |
| Use of vibrating tools (≥2 hours/day)                                 | 158   | 12.7 | 10 | 7.5    | 0.079   |
| Repeated/sustained posture with arms above shoulder level (≥2 hours/day) | 126   | 10.1 | 18 | 13.5   | 0.220   |
| Repeated/sustained posture with shoulder abduction                     | 373   | 29.9 | 13 | 44.8   | 0.084   |
| Repeated/sustained elbow movements (flexion/extension) (≥2 hours/day) | 355   | 28.5 | 37 | 27.6   | 0.830   |
| Pronation and supination movements (≥2 hours/day)                     | 156   | 12.5 | 20 | 15.2   | 0.389   |
| Wrist twisting movements (≥2 hours/day)                               | 386   | 31.0 | 40 | 31.7   | 0.859   |
| Use of the pinch grip (≥4 hours/day)                                  | 87    | 7.0  | 7  | 5.3    | 0.455   |

Psychosocial factors

| Factor                      | Count | Mean | SD | Median | p-value |
|-----------------------------|-------|------|----|--------|---------|
| Low social support          | 444   | 35.6 | 40 | 36.4   | 0.878   |
| Low decision latitude       | 626   | 50.2 | 63 | 51.6   | 0.372   |
| High psychological demands  | 609   | 48.9 | 58 | 45.3   | 0.442   |

p: p-value of independent Khi-2 test; *Fisher’s exact test; *UEMSD: upper-extremity musculoskeletal disorders