

NIOSH-CPWR

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National Institute of Occupational Health-Center to Protect Workers Rights (NIOSH-CPWR)

SPSS

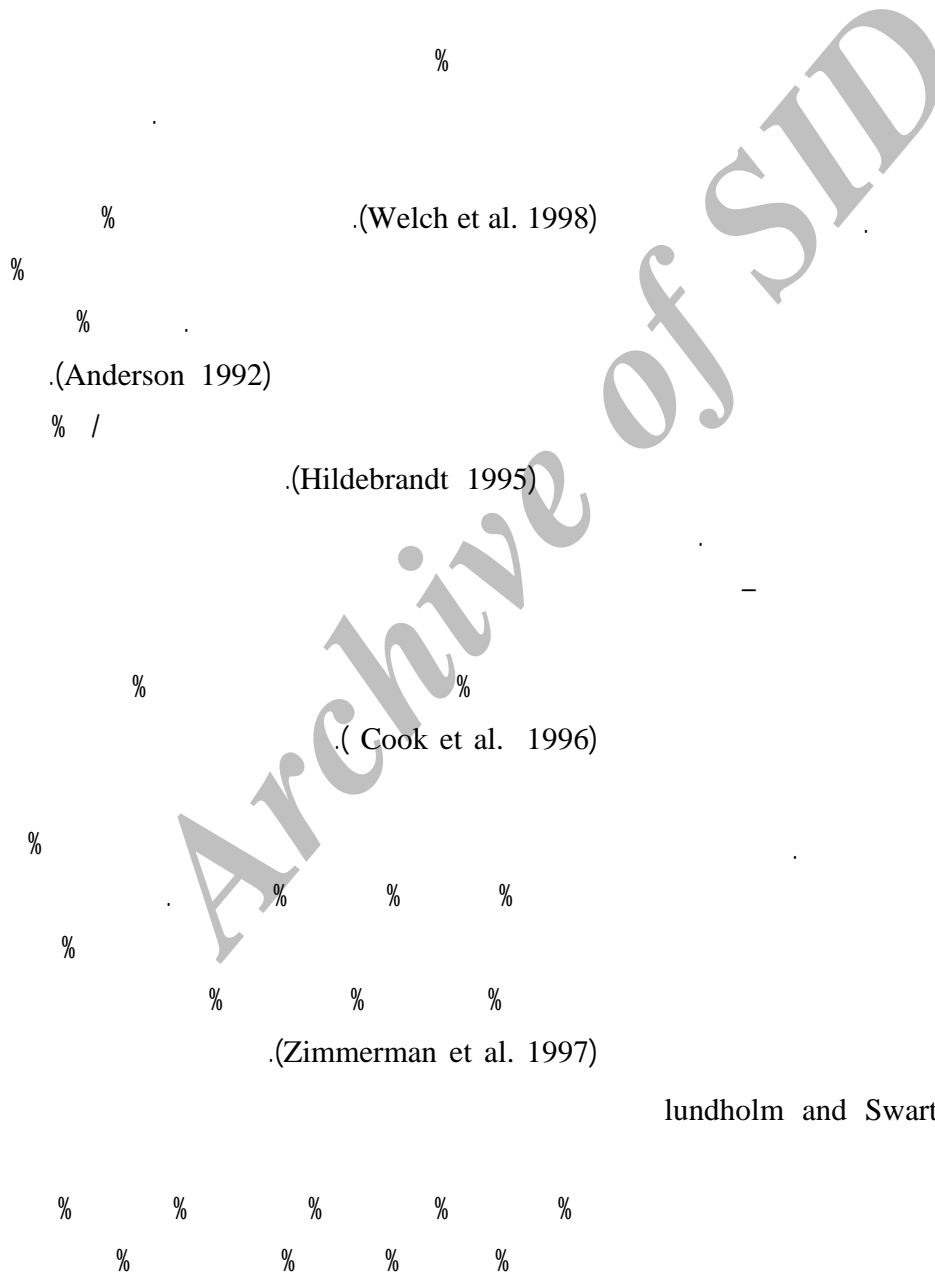
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References

- Alazab, R., 2004. Work-Related Diseases and Occupational injuries among Workers in the construction industry. *J Afr Newslett Occup Health and safety*, **14**, pp. 37-42.
- Andersson, GBj., 1999. Epidemiological features of chronic low-back pain. *The Lancet*, **354**(9178), pp. 581-585.
- Buchholz, B., 1996. PATH; A work sampling –based approach to ergonomic job analysis for construction and other non-repetitive work. *J Applied Ergonomics*, **27**(3), pp. 177-187.
- Buchholz, B., 2003. Quantifications of Ergonomic Hazards for Ironworker performing Concrete Reinforcement Task during Heavy Highway Construction. *AIHA journal*, **64**, pp. 243-250.
- Chaffin, DB. and Anderson, G., 1984. Occupational Biomechanics. New York: Wiley.
- Chubine, A., 2003. *Methods of assessment Posture in occupational Ergonomy*, Fanavaran, Tehran [In Persian].
- Cook, TM., Rosecrance, JC. and Zimmerman, CL., 1996. The university of Iowa construction survey. The center to protect workers right. (Report No.EI-96). Washington, DC.
- ELCOSH Construction Ergonomics Checklist.htm Copyright., 2004. CPWR – Center for Construction Research and Training (CPWR).
- Goldsheyder, D., 2002. Prevention of work-related musculoskeletal disorder in construction laborers.
- Hajghazade, M.F., 2006. *Assessment musculoskeletal disorders risk factor in construction workers by PATH method. a case study of the oromia. MS tehran university* [In Persian].
- Hildebrandt, VH., 1995. Back pain in the working population, prevalence rate in Dutch trades and professions. *Ergonomics*, **38**(6), pp. 1283-1298.
- Keyserling, NK., Punnett, L. and Fine, LJ., 1988. Trunk posture and back pain: Identification and control of occupational risk factors. *Applied Industrial Hygiene*, **3**, pp. 87-92.
- Kittusamy, NK., 2004. Whole body vibration and postural stress among operator of construction equipment: A literature review.
- Kuorinka, I., Jonsson, Kilbom, A., Vinterberg H. and Biering-Sorensen, F., 1987. Standardize Nordic Questionnaires for the Analysis of musculoskeletal symptoms. *Appl Ergon.* **18**, pp. 233-237.
- Lundholm, L. and Swartz H., 2006. Musculoskeletal ergonomic in the construction industry, Swedish work Environment authority, Statistics division, SE-171 84 Solna.
- National Institute for Occupational Safety and Health [NIOSH]., 1997. Musculoskeletal disorders and workplace risk factor: A critical review of epidemiological evidence for work-related musculoskeletal disorders of the neck, upper extremity, and low back (NIOSH publication 97-141). Cincinnati, OH: author.
- Rosecrance, J., Cook, T., Fekce, E. and Merlinol, F., 2002. 2: Musculoskeletal disorders among construction apprentices in Hungary. *Cent Eur J Public health*, **9**(4), pp. 183-7.
- Welch, LS., Hunting, KL. and Mendez, M., 1998. Disability among sheet workers (abstract). *American public Health Association*. Washington, D.C.
- Zimmerman CL., Cook, TM. and Rosecrance, JC., 1997. Operating Engineers: Work-related musculoskeletal disorders and the trade. *Applied Occupational and Environmental Hygiene*, **12**, pp. 670-680.