NEW YORK COMMITTEE FOR OCCUPATIONAL SAFETY AND HEALTH
P: (212) 227-6440 | F: (212) 227-9854 | 61 Broadway, Suite 1710, New York, New York 10006
NYCOSH

Risks Facing Women in Construction

Over the last couple of decades, an increasing number of women have begun to work in the construction industry. Although the number has declined since 2007, reflecting job losses in the construction industry overall, U.S. Bureau of Labor Statistics data for 2011 shows that more than 800,000 women were employed in some capacity in the construction industry (accounting for 9 percent of total construction industry). Only 163,000 were production workers, such as laborers, electricians and plumbers (2.3 percent of all construction trades workers). About half of women in the construction industry hold clerical and support jobs, one third are in management and professional positions, and one fifth work in production. Of those workers, women are most likely to be laborers and helpers, painters, carpenters, repair workers, electricians, drywall installers, truck drivers, heating and air conditioning mechanics, and plumbers.

Women in construction face issues in two main areas: workplace culture and health and safety.

Workplace Culture

Women in construction face certain culture issues unique to them. These issues were identified through interviews and focus groups of women construction workers conducted by Chicago Women in Trades (CWIT) and the National Institute for Occupational Safety and Health (NIOSH).

- ***Hostile workplace:*** Women in construction are subject to belittling remarks, harassment and physical assaults. Working in such a distracting environment can cause a worker to overlook proper safety precautions, leading to injuries.
- ***Sexual harassment:*** A majority of respondents in the surveys reported touching, comments and gestures from b male co-workers and supervisors.
- ***Isolation:*** Many women found themselves to be the only woman on a job site, creating additional stress.. Since mentoring of new workers often is done by colleagues, women may not receive the same attention and on-site training as their male counterparts.
- ***Job Insecurity:*** A majority of women felt vulnerable to losing their jobs, making them reluctant to report safety hazards or harassment.

Health and Safety Concerns

Health and safety concerns in construction affect both women and men, but some problems can have a great impact on women. .

From 2003 to 2010, an average of 15 women and 1,101 died every year on construction work sites, according to Bureau of Labor Statistics data. The rate of death (number of deaths per 10,000 workers) was 0.15 for

women and 1.1 for men. The rate of injuries for women was 32 per 10,000 workers, and for men, 154 per 10,000 workers. Women have a lower rate because they are less likely to work in the actual construction trades than men and often are not assigned the most hazardous jobs.

The major causes of death for women in construction are transportation incidents (e.g., struck by vehicle, collisions, overturns), violence and falls. For men, the major causes are falls, transportation incidents and contact with objects or equipment (e.g., struck by, caught in/between, cuts). A relatively high percentage of women in construction work are flaggers (crossing guards), an occupation with a high death rate. One study found that one third of women killed by motor vehicles on road construction sites worked as flaggers, compared to only 3 percent of men.

Violence to women in the construction industry occurred mostly to women working in construction offices. Homicide is the single largest causes of on-the-job deaths for all women workers in the U.S.

The major causes of injury in construction are bodily reaction/overexertion (bending, lifting, repetitive motion, etc.), contact with objects and falls. There is little data about injuries to women in construction. One study of union carpenters found that women had higher rates of sprains/strains and nerve conditions of the wrist and forearm than men. This is likely due to the fact that women tend to be assigned more repetitive tasks that can cause these injuries.

Some specific health and safety issues for women in the construction trades are:

- ***Ergonomics:*** Women have some specific musculoskeletal problems in construction. They have slightly shorter hands and lower grip strength than most men. Standard hand tools like wrenches tend to be too large for women's hands to grip tightly. Tools should be available is smaller sizes that would fit women (and some men). In addition, many women may have less upper body strength than men. Repeated lifting of heavy objects can lead to back problems. Lifting demands should be adapted to women as well as men.
- ***Personal protective equipment (PPE):*** Personal protective equipment, such as respirators, fall protection harnesses, safety shoes, gloves, coveralls, hard hats and safety goggles may be too large for many women. This poses both health hazards when respirators don't protect adequately against chemicals, and safety hazards where loose clothing and gloves get caught in machinery or when overly large boots cause tripping. Many women may find the poorly fitting equipment uncomfortable and not wear it, putting themselves at risk of injury.

In recent years, many manufacturers have been making PPE that fit women (see Resources). The International Safety Equipment Association (ISAE) has a list of companies and suppliers that offer female-specific PPE. However, many contractors – especially smaller ones – don't make PPE for women available, and are resistant to women bringing their own PPE. Providing PPE in a wide range of sizes would benefit all workers of all shapes and sizes,

- ***Reproductive hazards:*** Reproductive hazards on construction sites, such as lead and other chemicals are an issue for all, but especially for pregnant women. Controlling exposure to these chemicals is crucial. Prolonged standing during pregnancy is associated with preterm birth, and strenuous activity such as lifting and climbing can be a hazard during the later stages of pregnancy. In addition, pregnancy, family and medical leave are rarely available in construction.
- ***Sanitary facilities:*** Many construction sites have only temporary restrooms. Lack of clean toilets and hand-washing facilities are a major problem, even though OSHA requires them. As a result women may avoid using toilets or drinking water, leading to heat stress and other health problems, including bladder and kidney infections. Lack of locks or broken locks on the doors is also an issue for women, as is the location of bathrooms, particularly at night. ***Health and safety training:*** On-site safety training is often inadequate for both women and men. Women, though, often don't get the same training for skilled jobs as men. To help address this, in August 2013, the Occupational Safety and Health Administration (OSHA) started a web page on women in construction and formed an alliance with the National Association of Women in Construction (NAWIC) to provide information on hazards facing women in construction.

Conclusion

There is a lack of good current data on women in construction. Discussions with women from Non-Traditional Employment for Women (NEW) and NAWIC suggest that workplace culture issues have improved in recent years, but remain a concern, especially from older men. Many health and safety conditions of women have improved. Ergonomic problems, the availability of sanitary facilities and locks, and reproductive issues remain major problems.

Resources

New York Committee for Occupational Safety and Health (NYCOSH). www.nycosh.org

Occupational Safety and Health Administration (OSHA). Women in Construction. www.osha.gov/doc/topics/women/index.html

OSHA, Women in the Construction Workplace: Providing Equitable Safety and Health Protection https://www.osha.gov/doc/accsh/haswicformal.html

Centers for Disease Control, Women's Safety and Health Issues at Work Job Area – Construction http://www.cdc.gov/niosh/topics/women/construction.htmlNon-Traditional Employment for Women (NEW) www.new-nyc.org

National Association of Women in Construction (NAWIC) www.nawic.org For references, see the NYCOSH website at: www.nycosh.org/?/women in construction.

References on Women in Construction on NYCOSH website

Advisory Committee on Construction Safety and Health (ACCSH). 1999. Women in the Construction Workplace: Providing Equitable Safety and Health Protection. U.S. Department of Labor. Available at: https://www.osha.gov/doc/accsh/haswicformal.html

Moir S, Thomson M, and Kelleher, C. 2011. Unfinished Business: Building Equality for Women in the Construction Trades. Labor Resource Center, University of Massachusetts, Boston. Available at: http://scholarworks.umb.edu/lrc_pubs/?utm_source=scholarworks.umb.edu%2Flrc_pubs%2F5&utm_medium=PDF&utm_campaign=PDFCoverPages

Ontario Women's Directorate and the Industrial Accident Prevention Association. 2006. *Personal Protective Equipment for Women: Addressing the Need*. Available at: http://elcosh.org/document/1198/d001110/personal-protective-equipment-for-women-addressing-the-need.html

The International Safety Equipment Association. 2006**.** *ISEA Listing of Female Personal Protective Equipment Manufacturers*. Available at: http://elcosh.org/document/37/d001109/ISEA%2BListing%2Bof%2BFemale%2BPersonal%2BProtective%2BEquipment%2BManufacturers.html

U.S. Bureau of Labor Statistics. Injuries, Illnesses and Fatalities. Available at: www.bls.gov/iif

U.S. Bureau of Labor Statistics. 2013. BLS Reports: Women in the Labor Force: A Databook. Available at: www.bls.gov/cps/wlf-databook-2012.pdf

Welch L. S. , Goldenhar L. M., and Hunting K. L. Spring 2000. Women in Construction: Occupational Health and Working Conditions. J. Am. Med. Women's Assoc. 55(2):89-92.

O'Farrell B. 2013. Why the Person Building Your Next House Might Just Be a Woman. Alternet.
Available at: http://www.alternet.org/labor/why-person-building-your-next-house-might-just-be-woman

Women in Safety Engineering - Resource Book
https://spreadsheets.google.com/pub?key=0Aq1Ndj5v5GK9dFkyTDBqTktLN2dxZWk2blcwelJTSUE&hl=en&output=html