

## 5. Discussion

Documented injuries on duty make up less than 1% of consultations to the Clothing Industry Health Centres, but of these consultations nearly a quarter are of the needle-in-finger type. This corresponds very closely with the CDC survey (3). The low number of injuries seen could be because workers are free to go to a general practitioner or hospital of their choice which may be more convenient for them.

The higher incidence of injuries amongst younger workers bears out studies done by Skov et al((5,6) and by the CDC(3). The age difference did not quite reach significance, though the author is confident that with a larger sample size significance would have been obtained.

Contrary to the literature (8), that found the presence of cardiovascular disease to be a risk factor, the study found a chronic illness to be protective rather than a risk. Regrettably the sample size is too small to control for confounding by stratified analysis.

Unfortunately the majority of workers within the clothing industry have to meet set targets per hour and it was therefore difficult to assess whether being rushed is a risk factor. It needs to be noted again though that the only 2 injuries that occurred in a worker who was not working for production, occurred under other risky conditions: an unfamiliar machine and a faulty one. Sorock et al(7) and Hertz and Emmet(8) found that faulty materials, a new task and a new or faulty machine significantly increased the chance of an injury.

Contrary to the literature, training did not seem to have any impact on the risk of having an injury, with injured workers having had on average 10.38 weeks of training compared to the 3.71 weeks of the uninjured. This result together with the age difference between injured and controls, suggests that lack of experience, rather than training, be the more important risk factor.

Contrary to worker's perceptions, striped or checked cloth did not appear to play a major role in the risk of having an injury.

The left hand index finger was found to be the most vulnerable to injury as was found by Khelil et al( 12) in 1999. In the sewing process the left hand leads the right and pushes the material through, making the left index finger the finger that approaches the needle first.

The risk factors listed above do not fulfil the criteria for causality, as listed by Sir Bradford Hill, and therefore they cannot be considered to be causal.

#### Limitations

The main limitation was the time constraints leading to a small sample size. All the participants were recruited in Salt River and therefore are not representative of the Clothing Industry as a whole. It must be noted that the bulk of the factories are situated around Salt River, so the fact that the sample was from the Salt River clinic only should not make a big difference in the results.

There may have been selection bias, as not all the Clothing Industry Health Centres and none of the occupational health clinics at the factories were included in the study. The possible influence of alcohol and recreational drug usage was also not considered.

## 6. Conclusion

Injuries on duty make up less than 1% of consultations to the Clothing Industry Health Centres, but of these consultations nearly a quarter were of the needle-in-finger type. Workplace factors did not seem to increase the risk of sustaining a needle-in-finger injury, though working with faulty or different sewing machines could play a role. The presence of a chronic illness appears to be protective rather than a risk though the sample size was too small to control for confounding. There was a higher incidence of needle-in-finger injuries amongst younger workers implying that lack of experience was a risk factor.

## 7. Recommendations

A health and safety program aimed at younger workers emphasising hand care. Further research into the subject of injuries amongst clothing workers.

## 8. References

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