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Spring 6-1-2022

## **Study on the factors influencing return to work within first six months among blue collar workers with hand injury in India**

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## ABSTRACT

**Background:** Hand injuries are a common type of injury. Its intensity ranges from simple isolated fractures to complex crush injuries. Hand injuries have a direct effect on return to work (RTW) as it restricts the functional use of the hand. Literature shows that RTW outcome was influenced by socio-demographics such as age, gender, education level, marital status, work sector factors, and condition-specific factors for illustrating the severity of hand injured, and the dominance of hand injury. Return to work after hand injury is a complex process and involves the interplay of many factors. There was limited literature related to mentioning the factors that influenced return to work, and the factor predictor of RTW outcome in blue-collar workers with hand injured in India. Therefore, the study aims to investigate the factors influencing time return to work (TRTW) within the first six months among blue-collar workers with hand injury.

**Methods:** The observational study in a retrospective cohort was conducted on 104 blue-collar workers with hand injury within the first six months in India. Return to Work Survey Form, the Modified Hand Injury Severity Score (MHISS) scale excluding the integument component were administered. The statistical analysis which included descriptive and inferential statistics was performed by SPSS version 28.0.0.1.

**Results:** Out of 104 participants, aged from 20 to 59 years old, 69 people had RTW within the first six months, and 13 had not. Overall, a strong association between the RTW outcome and the work sector, reimbursement was found. There was a significant association was found between the RTW outcome and the classification of hand injury ( $p < .001$ ). Hand injury severity was found to be a strong significant predictor for return to work ( $p < .001$ ). The hand injury severity in the present study revealed a significant and positive correlation with time return to work ( $p < .001$ , and Pearson's  $r$  was .758).

**Conclusion:** Being self-employed, and workers without reimbursement were the factors that influence to a successful return to work among blue-collar workers. MHISS and classification of hand injury are predicted factors to RTW outcomes. Subjects with less MHISS have a high chance of RTW and take TRTW shorter.

**Keywords:**

Return to work, hand injury, injury severity, duration, determinants, blue-collar workers, predictor.