Content lists available at Pubmedia

International Journal of Health and Information System (IJHIS)

journal homepage: https://ijhis.pubmedia.id/index.php/ijhis

(Article)

The Provision of Social Support Increases the Return-to-Work Rate of Musculoskeletal Injury Patients: A Systematic Review

Siti Zahra Arfiani, Muhammad Hasan, Inke Kusumastuti*

Abstract: *The most common problem in orthopedics that becomes the main cause of disability worldwide is musculoskeletal injuries. It may develop into chronic conditions that interfere with social function, quality of life, and productivity. The Return to Work (RTW) Rate is used for measuring the success of intervention. Provision of social support becomes the psychosocial interventions that may reduce the negative impact. This study aimed to learn whether social support may increase the RTW rate of musculoskeletal injury, by conducting a systematic review based on Preferred Reporting Items for System and Meta Analysis (PRISMA). Literature search using three databases, Springer, PubMed, ScienceDirect, and manual searching. The critical appraisal tool used was the Joanna Briggs Institute (JBI) checklist. There were seven included articles with high and medium quality. All studies were conducted in developed countries. Social support from supervisors and colleagues increases the chances of achieving partial and sustained RTW, and reduces the rate of interrupted RTW, while social support from family and friends can reduce the chances of achieving a partial RTW. More studies analyzing provision of social support to patients with other medical conditions should be made in the population of working age in developing countries, to assess for possible generalization of the results of the present systematic review.*

Keywords: *Social Support, Return To Work, Musculoskeletal Injury.*

Citation: To be added by editorial staff during production.

Academic Editor: Inke Kusumastuti

Received: 04-07-2025
Accepted: 16-08-2025
Published: 28-09-2025

1. Introduction

Musculoskeletal injuries are the most common health problems in orthopedics that cause disability worldwide. This injury results in approximately 20-50 million people experiencing disability and contributes to around 12% of Disability Adjusted Life Years (DALYs) loss worldwide [1]. In developing countries, musculoskeletal injuries are a widespread and increasing occupational health problem and mostly affect the working-age population [2]. When undertreated, musculoskeletal injury may develop into a chronic condition that can cause chronic pain, functional impairment, and disability [3]. It might also interfere with social function, mental health, quality of life, and productivity [4]. Several studies have shown that psychosocial factors significantly affect the intermediate phase between acute and chronic musculoskeletal injury [5]. One of the psychosocial factors associated with favorable outcomes and recovery following musculoskeletal injuries is the provision of social support **[6].** Providing social support might decrease the negative impacts of injury-related stress and reduce the risk of chronicity [7].

However, research findings about the correlation between social support and recovery from musculoskeletal injuries have been inconclusive. Most studies identified that social support from friends, family, co-workers, and supervisors positively correlates with the quality of health and well-being [8]. Providing social support has been found to reduce pain intensity in patients with chronic pain [9]. Meanwhile, other studies have associated the provision of social support with poor mental health, increased dependency, and demotivation to return to work [10].

One assessment instrument used to assess the successful recovery of musculoskeletal injured patients in the working-age population is the Return to Work (RTW) rate. RTW is defined as a process or time needed by injured, sick, or disabled workers to return to their jobs after they stop working due to injuries [11]. This rate might indicate the impact of musculoskeletal injury, the amount of injury-related indirect cost, and the patient's quality of life [12]. A high RTW rate might be promoted by appropriate early intervention and adequate awareness of physical, environmental,

and psychosocial factors [13]. Information on the role of social support in supporting the RTW process of musculoskeletal injury patients is available. However, a detailed and comprehensive review of the topic is yet to exist. Identifying elements of social support that improve the RTW process in this population would provide recommendations for psychosocial interventions. Therefore, we performed this systematic review to examine the role of social support in increasing the RTW rates of musculoskeletal injury patients.

2. Materials and Methods

This systematic review followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA). We comprehensively searched PubMed, Springer, and ScienceDirect databases for articles published from January 2012 to December 2022 using keywords as follows: "social support", "return to work", and "musculoskeletal injury". Boolean operators (AND, OR) and truncation (*) were applied to broaden and narrow the search results. We also used the Medical Subject Headings (MeSH) terms in the search strategy. However, the search language was limited to English and Bahasa Indonesia.

Inclusion criteria were set to filter the results as follows: (1) Article investigating the provision of social support in patients with musculoskeletal injury; (2) Study population in productive age (18-65 years old); (3) Reported RTW in partial, sustained, interrupted form; (4) Article with cohort study design. Several exclusion criteria were: (1) Articles with a population of traumatic brain injury patients; (2) Articles citing medical professionals as the source of social support.

Data extracted from the articles include author and year of publication, number of participants, participants characteristics, source of social support, findings, and interpretation. The primary outcome was to explore the role of social support in increasing the RTW Rates of musculoskeletal injury patients.

Several forms of RTW reported in the study were evident, including partial, sustained, and interrupted RTW. Partial RTW is the patient's ability to fulfill at least 50% of their working hours after the injury. Sustained RTW is the patient's ability to perform modified work within 28 days or more after the injury period. Lastly, interrupted RTW is the patient's inability to work within 28 days or more after the injury period. The quality of included studies was assessed using the Joanna Briggs Institute (JBI) Checklist for Cohort Studies with an interpretation score with an interpretation score of ≥70% = high quality, 50-69% = medium quality, and <50%=low quality [14].

3. Results and Discussion

3.1. Result

3.1.1 Study Selection

A total of 798 articles were initially identified. After removing 28 duplicates, 767 articles were screened based on title and abstract, with 316 full-text articles deemed eligible for further examination. Finally, 309 studies were excluded as they failed to meet the inclusion criteria. Seven articles were included in this review. The PRISMA Flow Diagram for the article selection is depicted in Figure 1. The quality assessment of the studies showed that four and three articles had high and medium quality, respectively.

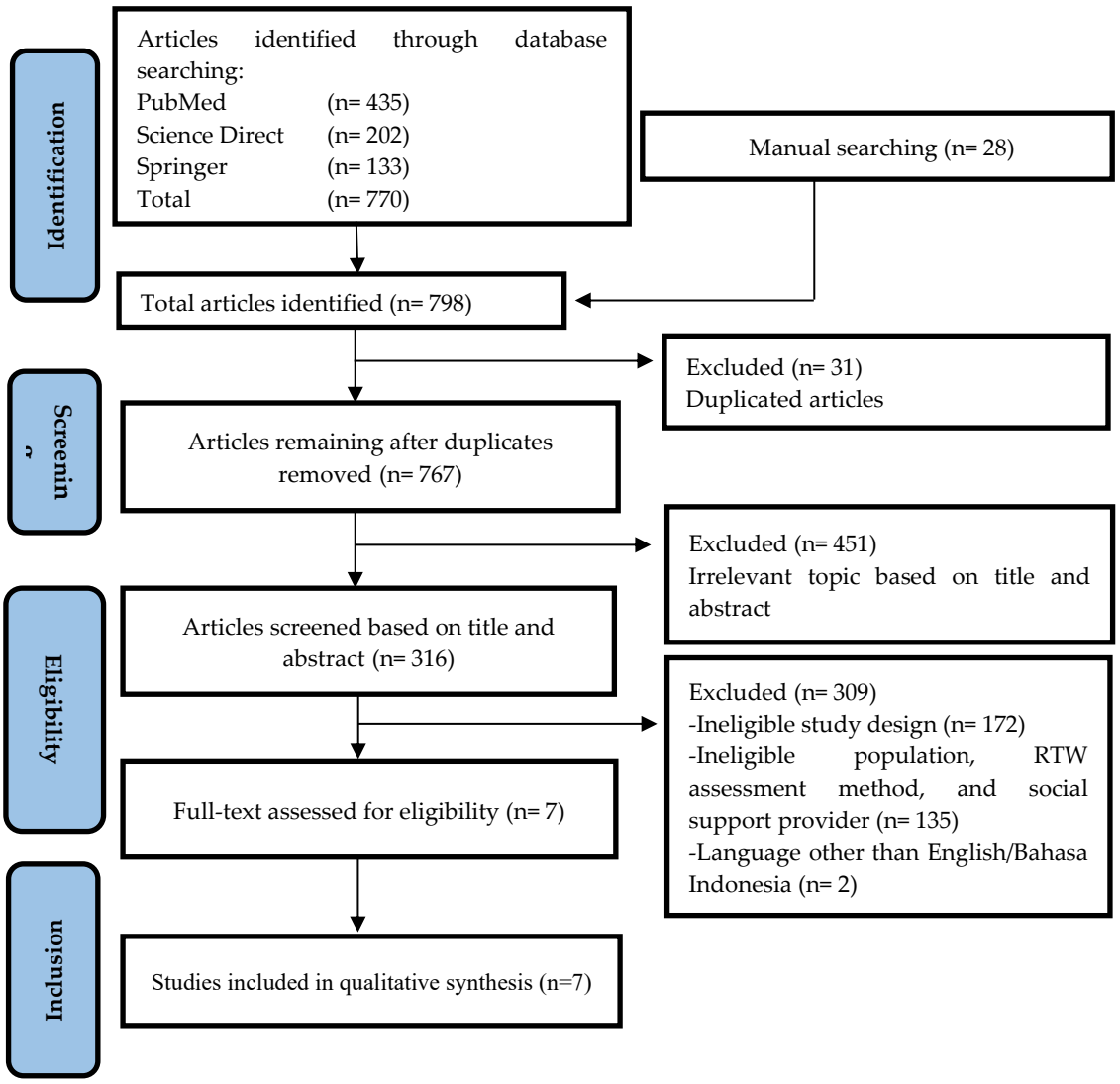

Figure 1. PRISMA flow diagram of selected studies

3.1.2 Study Characteristics and Study Results

The general characteristics of selected studies are summarized in Table 1. All articles included in this study were cohort studies published from 2013 to 2021 covering 2475 research subjects from Australia, Norway, England, Canada, and Sweden. Most studies examined social support from supervisors and colleagues. The RTW outcomes were observed in follow-up periods ranging from one to twelve months. Most subjects were male, and one study involved female-only subjects (Table 1).

Table 1. Study characteristic

Author	Year	Country	Total participants	RTW type	Social support source	Odds to RTW	Correlation to RTW	
							Positive	Negative
Haveraaen et al.	2016	Norway	251	Partial	Supervisors and coworkers	Coworkers support (OR 3.4; 95% CI 1.5-7.9), p = 0.004* Supervisors support (OR 3.9; 95% CI 1.67.3), p = 0.002*	✓	
Jetha et al.	2017	Australia	551	Sustained	Supervisors and coworkers	Coworkers support OR (1.2; 95% CI 0.67-2.1) p < .001*	✓	

						Supervisors support OR (2.3; 95% CI 1.4-3.9) p < .001*		
Kendrick et al.	2017	England	273	Partial	Family and friends	Friend and family support OR (0.93, 95% CI 0.88-0.99) p > 0.05		✓
Laisné et al.	2013	Canada	62	Partial	Coworkers	Coworkers support (OR 2.63, 95% CI 1.05–6.58) p = 0.04*	✓	
Lane et al.	2017	Australia	634	Sustained	Supervisors	Supervisors support (OR 2.50; 95% CI 1.74-3.60)	✓	
Rashid et al.	2021	Sweden	141	Partial	Family and friends	Friend and family support OR (0.50; 95% CI 0.28-0.92) p=0.03*		✓
Sears et al.	2021	Canada	567	Interrupted	Supervisors and coworkers	Coworkers support OR (0.70, 95% CI 0.55-0.90) p= 0.006* Supervisors support OR (0.50, 95% CI 0.40-0.63) p <.001*		✓

Abbreviation: RTW: Return to Work
*= Significant at p < 0.05

3.2 Discussion

All seven articles included show that social support from supervisors and colleagues can increase the odds of achieving partial and sustained RTW, and reduce the odds of interrupted RTW in musculoskeletal injury patients.

Four studies [15,16,18,21] reported a positive correlation between the provision of social support and RTW rates in patients with injury. Similarly, previous studies have associated high social support with higher RTW rates in patients with injury. Items on the social support scales such as co-worker's concern, interest, friendliness, and helpfulness seemed to have the strongest impact. Helpful and accommodating co-workers might help reduce some of the work pressure, making the process of returning to work after injury easier [15]. Additionally, social support is shown to be a buffer for psychological strain. Social support is considered to have a buffering effect that can affect one's physical and mental condition by protecting the person from various types of pressure they are experiencing, such as stress caused by injuries [16, 19, 21].

High social support from coworkers can increase a person's self-confidence and optimism, leading to better self-value. When injured workers experience low self-confidence and loss of optimism, high levels of social support can help them overcome these problems and fasten their RTW process. This finding is supported by previous studies revealing that moral support, assistance, interest, and understanding from coworkers were the most important factors for whether injured workers returned to work or not [22].

For social support from supervisors, four studies [15, 16, 19, 21] reported significant correlations between the provision of social support and the RTW rates of injured patients. These findings have been found in previous studies and the association between high social support from supervisors and higher RTW rates is well established. The study by Haveraaen et al. (2016), Jetha et al. (2017), Lane et al. (2017), and Sears et al. (2021) stated that having A helpful and concerned supervisor was significantly associated with higher RTW rates. Supervisors are often the first to learn about a workplace injury and, as a result, play an important role in work disability management. An initial supportive reaction to an injury may create a foundation that affects all phases of return to work. Furthermore, social support from supervisors might make the worker feel valued and appreciated, reducing the potential strain on their relationship in the RTW process [15, 16, 18, 21]. These findings

are also supported by a qualitative study which shows that several leadership traits demonstrated by supervisors, such as having high concern for injured workers can increase the worker's self-confidence and motivation to return to work [22].

For social support from family and friends, two studies [17, 20] reported a negative correlation between providing social support from family and friends and the RTW rates of rates of injured patients. The provision of social support was only observed in a one-month follow-up period, so this support was considered not to have a buffering effect [17]. Additionally, one study with all female worker participants showed that social support from family and friends could reduce the odds of RTW in musculoskeletal injured patients [20]. These results are in line with another research that stated that for female workers experiencing musculoskeletal injuries due to traffic accidents, the provision of social support from family or friends was negatively correlated with their RTW rates. When a female worker experiencing an injury receives ongoing social support from family, they tend to normalize the person's illness, leading to an increased preference to stay home, and discomfort about returning to work [23]. These conditions can be explained in the operant conditioning model, where certain behaviors, such as someone's limitation following injury are reinforced and maintained by positive social support from those around them [24]. Although two articles included in this systematic review [17, 21] showed that social support from family and friends was negatively correlated with rates of RTW, social support from family and friends in both studies was associated with reduced rates of depression and improved quality of life.

4. Conclusions

Social support from supervisors and colleagues can increase the chances of achieving partial and sustained RTW, and reduce the rate of interrupted RTW. This support directly increases work motivation and organizational commitment in patients with musculoskeletal injuries. Meanwhile, social support from family and friends can reduce the chances of achieving a partial RTW. This support might create a sense of comfort that allows patients with musculoskeletal injuries to normalize their painful condition and prevent their return to work.

5. Patents

There are no patents resulting from the work reported in this manuscript.

Author Contributions: Conceptualization, Siti Zahra Arfiani, Muhammad Hasan and Inke Kusumastuti.; methodology, Siti Zahra Arfian and Inke Kusumastuti; software, Siti Zahra Arfiani; validation, Muhammad Hasan and Inke Kusumastuti.; formal analysis, Siti Zahra Arfiani, Muhammad Hasan and Inke Kusumastuti; data curation, Siti Zahra Arfiani, Muhammad Hasan and Inke Kusumastuti; writing—original draft preparation, Siti Zahra Arfiani.; writing—review and editing, Muhammad Hasan and Inke Kusumastuti; visualization, Inke Kusumastuti; supervision, Inke Kusumastuti; project administration, Siti Zahra Arfiani, Muhammad Hasan and Inke Kusumastuti. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Institutional Review Board Statement: This study did not require ethical approval.

Informed Consent Statement: Not applicable.

Acknowledgments: -

Conflicts of Interest: The authors declare no conflict of interest.

References

1. Dueñas M, Ojeda B, Salazar A, Mico JA, Failde I. A review of chronic pain impact on patients, their social environment and the health care system. J Pain Res. 2016;9:457-467. doi:10.2147/JPR.S105892
2. Fasihi Harandi T, Mohammad Taghinasab M, Dehghan Nayeri T. The correlation of social support with mental health: A meta-analysis. Electron Physician. 2017;9(9):5212-5222. doi:10.19082/5212

3. Gellert P, Häusler A, Suhr R, et al. Testing the stress-buffering hypothesis of social support in couples coping with early-stage dementia. PLoS One. 2018;13(1). doi:10.1371/journal.pone.0189849
4. Goplen CM, Verbeek W, Kang SH, et al. Preoperative opioid use is associated with worse patient outcomes after Total joint arthroplasty: A systematic review and meta-analysis. BMC Musculoskelet Disord. 2019;20(1). doi:10.1186/s12891-019-2619-8
5. Hardy CJ, Richman JM, Rosenfeld LB. The Role of Social Support in the Life Stress/Injury Relationship. Sport Psychol. 2016;5(2):128-139. doi:10.1123/tsp.5.2.128
6. Haveraaen LA, Skarpaas LS, Berg JE, Aas RW. Do psychological job demands, decision control and social support predictreturn to work three months after a return-to-work (RTW) programme? the rapid-RTW cohort study. Work. 2016;53(1):61-71. doi:10.3233/WOR-152216
7. Hruschak V, Cochran G. Psychosocial predictors in the transition from acute to chronic pain: a systematic review. Psychol Health Med. 2018;23(10):1151-1167. doi:10.1080/13548506.2018.1446097
8. Jetha A, LaMontagne AD, Lilley R, Hogg-Johnson S, Sim M, Smith P. Workplace Social System and Sustained Return-to-Work: A Study of Supervisor and Co-worker Supportiveness and Injury Reaction. J Occup Rehabil. 2017;28(3):486-494. doi:10.1007/s10926-017-9724-z
9. Kamp T, Stevens M, van Beveren J, et al. Influence of social support on return to work after total hip or total knee arthroplasty: a prospective multicentre cohort study. BMJ Open. 2022;12(5):e059225. doi:10.1136/bmjopen-2021-059225
10. Kendrick D, Coupland C, Whitehead J, et al. Psychological morbidity and return to work after injury: Multicentre cohort study. British Journal of General Practice. 2017;67(661):e555-e564. doi:10.3399/bjgp17X691673
11. Laisné F, Lecomte C, Corbière M. Biopsychosocial determinants of work outcomes of workers with occupational injuries receiving compensation: A prospective study. Work. 2013;44(2):117-132. doi:10.3233/WOR-2012-1378
12. Lane TJ, Lilley R, Hogg-Johnson S, LaMontagne AD, Sim MR, Smith PM. A Prospective Cohort Study of the Impact of Return-to-Work Coordinators in Getting Injured Workers Back on the Job. J Occup Rehabil. 2017;28(2):298-306. doi:10.1007/s10926-017-9719-9
13. Leiva R, Rochaix L, Kiefer N, Dupont JCK. Evaluating the Impact of Intensive Case Management for Severe Vocational Injuries on Work Incapacity and Costs. J Occup Rehabil. 2021;31(4):807-821. doi:10.1007/s10926-021-09967-6
14. Lin FC, Lin CP, Chuang HY, Wu TW, Huang PJ, Yang CC, Kuo CH. Do Short-Term Improvements in ADL and IADL Have Association with Return to Work in Workers with Occupational Injury? From an Occupational Injury Cohort in Taiwan. Saf Health Work [Internet]. 2025 Jan [cited 2025 Jun 24]. Available from: https://doi.org/10.1016/j.shaw.2024.12.003
15. Lysaght R, Larmour S. An Exploration of Social Support as a Factor in the Return-to-Work Process. Vol 30. IOS Press; 2008.
16. Makino K, Lee S, Bae S, et al. Pain characteristics and incidence of functional disability among community-dwelling older adults. PLoS One. 2019;14(4). doi:10.1371/journal.pone.0215467
17. Njaka S, Mohd Yusoff D, Anua SM, Kueh YC, Edeogu CO. Musculoskeletal disorders (MSDs) and their associated factors among quarry workers in Nigeria: A cross-sectional study. Heliyon [Internet]. 2021 Feb [cited 2025 Jun 24];7(2):e06130. Available from: https://doi.org/10.1016/j.heliyon.2021.e06130
18. Prang KH, Berecki-Gisolf J, Newnam S. Recovery from musculoskeletal injury: The role of social support following a transport accident. Health Qual Life Outcomes. 2015;13(1). doi:10.1186/s12955-015-0291-8
19. Rashid M, Kristofferzon ML, Nilsson A. Predictors of return to work among women with long-term neck/shoulder and/or back pain: A 1-year prospective study. PLoS One. 2021;16(11 November). doi:10.1371/journal.pone.0260490
20. Richmond NL, Meyer ML, Hollowell AG, Isenberg EE, Domeier RM, Swor RA, Hendry PL, Peak DA, Rathlev NK, Jones JS, Lee DC, Jones CW, Platts-Mills TF. Social Support and Pain Outcomes After Trauma Exposure Among Older Adults. Clin J Pain [Internet]. 2018 Apr [cited 2025 Jun 24];34(4):366-74. Available from: https://doi.org/10.1097/ajp.0000000000000545
21. Sears JM, Schulman BA, Fulton-Kehoe D, Hogg-Johnson S. Workplace Organizational and Psychosocial Factors Associated with Return-to-Work Interruption and Reinjury among Workers with Permanent Impairment. Ann Work Expo Health. 2021;65(5):566-580. doi:10.1093/annweh/wxaa133
22. Tengku Mohd TA, Yunus RM, Hairi F, Hairi NN, Choo WY. Social support and depression among community dwelling older adults in Asia: a systematic review. BMJ Open [Internet]. 2019 Jul [cited 2025 Jun 24];9(7):e026667. Available from: https://doi.org/10.1136/bmjopen-2018-026667

23. Torgbenu EL, Nakua EK, Kyei H, Badu E, Opoku MP. Causes, trends and severity of musculoskeletal injuries in Ghana. BMC Musculoskelet Disord. 2017;18(1):349. doi:10.1186/s12891-017-1709-8
24. Weber J, Angerer P, Brenner L, et al. Early intervention, treatment and rehabilitation of employees with common mental disorders by using psychotherapeutic consultation at work: study protocol of a randomised controlled multicentre trial (friaa project). BMC Public Health. 2021;21(1). doi:10.1186/s12889-021-11195-9