

Factors Influencing Return to Work in Malaysia: A Systematic Literature Review

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Abstract— *Previous studies have highlighted various factors that contribute to return to work, such as recovery expectations, depression, job satisfaction, stress, gender, age, employer interest, motivation, intervention duration, and type of injury. However, there is a need to synthesize and analyse the existing literature to gain a comprehensive understanding of the considerations specific to the Malaysian context. This systematic literature review aims to identify the influencing factors to return to work among individuals who have experienced work-related injuries or illnesses in Malaysia and explore their implications for policy and practices. The PRISMA Statement (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) review approach is used for this review. Three digital databases of Google Scholar, SCOPUS, and PubMed databases were searched resulted in 21 related studies. The factors were categorised into four major factors: socio-demographic, psychological and personal, disease and treatment-related and work-related factors. These factors include gender, age, year of injury, industry, job hierarchy, employer interest, motivation, intervention duration, and type of injury. Furthermore, the analysis highlighted various impediments to returning to work, such as a lack of workplace support, insufficient rehabilitation programs, and financial concerns. These findings are substantial for policymakers and practitioners to develop targeted interventions and support systems that address the specific needs of individuals returning to work after work-related injuries or illnesses. By considering these factors, policies and practices can be tailored to improve the likelihood of successful return to work and promote the well-being of employees in Malaysia.*

Keywords— *employment, injured worked, illnesses, predictors, barriers*

I. BACKGROUND

Work-related injuries and illnesses can significantly impact individuals, their families, and employers. The consequences faced by injured workers can lead to disability and an inability to work, which can have long-lasting effects on their well-being and financial stability. In Malaysia, the Return to Work (RTW) program is designed to help injured workers return to work after an illness or injury. The program is operated by Malaysia's Social Security Organisation (SOCSO) and has been in place since 2010 [39].

The program collects data on successful RTW patterns and investigates factors contributing to successful RTW, such as gender, age, industry, and job hierarchy. The program's success is measured by the proportion of injured workers who successfully returned to work and the financial returns that can be brought back by injured workers who have returned to work, combined with the qualitative benefits, substantially outweigh the costs of the RTW program. The program has had a positive impact on helping injured workers return to work and is effective in increasing the proportion of injured workers who successfully return to employment. However, the success rate of returning to work after an injury or illness remains low.

II. MOTIVATION

The return to work after an injury or illness is a critical aspect of the rehabilitation process and has significant

implications for individuals, employers, and society. In Malaysia, understanding the factors that influence return to work is crucial for developing effective policies and interventions to support individuals in their transition back to the workforce.

The existing literature has primarily focused on supply-side explanations of the dynamics of return to work, such as the moral hazard behavior induced by disability benefits or the health constraints that may affect workers' ability to return to work [15]. However, it is important to consider a broader range of factors that may influence return to work outcomes in Malaysia. For example, RTW coordination programs have been shown to be effective in identifying barriers and assessing strengths and limitations that may prevent workers from successfully returning to work [45]. These programs can provide valuable insights into the specific challenges faced by Malaysian workers and inform the development of targeted interventions.

In addition to physical and health-related factors, it is essential to consider the psychological and social factors that may act as barriers to return to work. Clinicians and healthcare professionals often focus on functional capacity and workplace issues, potentially overlooking the psychological or social factors that may also pose barriers in the return-to-work process [32]. By considering a holistic approach that encompasses both physical and psychosocial factors, a more comprehensive understanding of the factors influencing return to work in Malaysia can be achieved.

Furthermore, it is important to acknowledge the unique cultural and economic context of Malaysia in understanding the factors influencing return to work. Previous research has highlighted the push and pull factors that influence the return intentions of Malaysia's diaspora, indicating the potential influence of similar factors on the return to work decisions of individuals within the country [19, 43]. Additionally, the impact of Shariah non-compliant risk on stock returns in Malaysia has been explored, demonstrating the relevance of economic factors in understanding return to work outcomes [8].

Individual, occupational, and supportive factors have also been found to influence the successful return to work in Malaysia. A study using a structural equation model identified four observed variables that showed high correlation coefficients with successful return to work: handicap level, duration of convalescence, working duration, and support from the company [22]. These factors indicate that individual characteristics, the length of recovery, and the support received from the workplace play a role in the success of returning to work.

III. OBJECTIVES

Previous studies have highlighted various factors contributing to successful return to work, such as recovery expectations, depression, job satisfaction, stress, gender, age, employer interest, motivation, intervention duration, and type of injury. However, there is a need to synthesize and analyze the existing literature to comprehensively understand the predictors and barriers specific to the Malaysian context.

Thus, this systematic literature review aims to identify the influencing factors to returning to work in Malaysia and explore their implications for policy and practice. Understanding the factors that influence return to work is crucial for developing effective interventions and support systems that can facilitate the reintegration of individuals into the workforce.

IV. CONTRIBUTIONS

The findings of this review have implications for policy and practice in Malaysia. By identifying the factors that influence return to work, policymakers and practitioners can develop targeted interventions and strategies to support individuals in their return to the workforce. This evidence-based approach can inform the development of effective policies and interventions to improve return to work outcomes in Malaysia, ultimately improving the overall well-being and productivity of the Malaysian workforce.

V. METHODOLOGY

The Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) checklist was employed as a guideline to guarantee a high-quality systematic literature review. It is an evidence-based minimum set of items for reporting studies evaluating the effects of interventions. Still, it can also be used as a foundation for conducting systematic reviews with aims other than assessing interventions. PRISMA can also be used to report on different sorts of research, most notably intervention evaluations. PRISMA can also assess the quality of published systematic reviews [25].

The Systematic Review Process and Search Outcome

There were three phases to the systematic review method for choosing relevant publications for the current investigation.

Phase 1: Identification

The first stage is identifying keywords discovered by scanning the thesaurus, dictionaries, and previous research articles for related and similar topics. A wide-ranging search strategy was used. The search strategy involved three databases, namely, Google Scholar, SCOPUS, and PubMed.

Google Scholar were selected as the searches would yield sufficient coverage of targeted papers from the most current databases to ensure that researchers have access to the most up-to-date and relevant studies for the review [37].

Scopus is the second most used search engine since it is the only database that combines an extensive, curated abstract and citation database with enriched data and linked scholarly content. Having relevant and trustworthy research, quickly identifying experts, and accessing reliable data, metrics, and analytical tools help make confident research strategy decisions.

PubMed were chosen because they are reputable publishers known for their high-quality journals. Researchers trust these publications because they publish accurate and high-quality research. Furthermore, they ensure their publications are submitted to rigorous quality control, generally known as "peer review." This high standard and their skilled editorial board guarantee that they publish trustworthy studies consistently.

The search was carried out using exact keyword combinations on titles and abstracts, as these were handled by breaking down the review questions. The keywords used in the searches were "return to work", AND "Malaysia". A systematic search approach was developed, including essential search phrases and associated text words. Table 1 shows the keywords that were used.

Table 1
Databases and keywords used in the search process

Databases	Keywords used
Google Scholar	English: ("return to work" AND "Malaysia")
SCOPUS	English: TITLE-ABS-KEY (("return to work") AND "Malaysia".)
PubMed	English: ("return to work" AND "Malaysia")

The inclusion criteria were established as follows: (1) original papers published in English between January 2008 and October 2023, (2) journal articles with empirical data, (3) English language publications, (4) the main research focus was factors to return to work, (5) study related to Malaysian population, and (7) articles in which full-text versions could be obtained given the constraint in time and available resources. The year 2008 was chosen as the starting point because the RTW program started on 15 January 2007 in Malaysia, allowing a year for any research on return-to-work

practices.

This review excluded articles that (1) reviewed the available literature, non-research papers, books or book series, and conference proceedings, (2) non-English papers, (3) research focusing on other than factors to RTW, (4) extended beyond the Malaysian geographical scope (iii) reported on RTW among injured workers who did not suffer injuries or illnesses as a direct and/or indirect consequence of work.

Accordingly, in September 2023, after identifying all relevant keywords and criterias, 96 articles were collected from Google Scholar (43), SCOPUS (29), PubMed (17) and including 7 additional records identified through other sources.

Phase 2: Screening

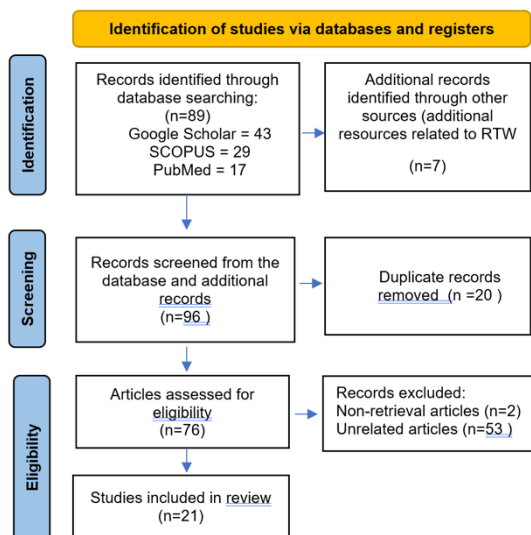
The 96 articles discovered in Phase 1 were screened out and 20 duplicate records removed.

Phase 3: Eligibility

A total of 76 articles were prepared for the third stage, eligibility. The titles, abstracts, primary contents, discussion, and subject matter of the publications were thoroughly checked to ensure that they met the inclusion criteria and were appropriate for review in the current study to achieve the current research aims. As a result, 2 articles were removed since the full-text versions could not be retrieved and 53 articles are unrelated; 3 discusses return to work among breastfeeding mothers and other 50 discusses on other than factors to RTW after injury or illnesses. Therefore, 21 papers fulfilled the criteria of this systematic review.

The PRISMA flow diagram in Figure 1 depicts the procedure used to reduce and analyse the records.

*Figure 1
PRISMA Flow-Diagram Indicating the Selection of Studies*



VI. RESULTS

Study Characteristics

The review included all papers published between 2008 and 2023. Two articles were published in 2011 [35, 36], one

in 2012 [42], two in 2013 [26, 27], one in 2014 [38], two in 2015 [3,13] and one in 2016 [4]. Meanwhile, two articles were published in 2017 [5, 28], three in 2018 [6, 7, 41], one in 2020 [21], two in 2021 [12, 18] and four in 2022 [11, 24, 23, 31].

In terms of research design, 18 papers used quantitative design. Three articles are cross-sectional studies examining data taken from a non-governmental voluntary organisation [35, 36], seven articles are cross-sectional studies examining data taken from organisations' providing compensation for injured workers, such as Malaysia's SOCSO [3, 4, 5, 6, 7, 23, 31], seven articles are cross-sectional studies examining data taken from outpatient and rehabilitation clinics in hospitals [11, 12, 21, 26, 27, 28, 41], one is a retrospective longitudinal cohort study [38], and one is a short term longitudinal study [18].

Meanwhile, three papers used qualitative design: using focus group and semi-structured interviews [42], face to face, semi structured interviews [13] and case study [24]. All 21 articles concern studies were conducted in Malaysia except one study included Malaysian sample as part of the respondents.

From these 21 studies, five studies conducted among SOCSO's insured workers without specifying the type of injury [3, 4, 5, 6, 7], two studies were conducted among patients with a spinal cord injury (SCI) recruited from a voluntary, non-governmental organisation known as the Malaysian Spinal Injury Association (MASIA) [35, 36, two studies involved insured workers with musculoskeletal disorders (MSD) [26, 27], two among patients with hand injury [21, 23] and three among stroke patients [11, 12, 24]. Additionally, two studies were conducted among breast cancer survivors [41, 42] and one study among colorectal cancer [13]. Moreover, one study each was done among thoracolumbar fracture patients [38], mild traumatic brain injury (mTBI) patients [18], eye injury patients [31], major cardiac event [28] and among healthcare professionals (HCPs) [13] recruited from rehabilitation/outpatient clinics, hospitals, scientific meetings, and professional associations/societies.

Major themes related to factors influencing return to work in Malaysia

From the review, there are four major themes related to factors influencing to return to work that can be listed as follows: socio-demographic factors, psychological and personal factors, disease and treatment-related factors, and work-related factors.

Socio-demographic factors

The worker's gender, age, ethnicity, education level and employment status contributed significantly to return to work. The male gender was linked with better return to work outcomes [3, 4, 5, 6, 35]. However, one study found that males are more likely to return to work only when they work under a new employer, rather than under the same employer, upon returning to work [6] and only when homemakers are not considered a form of employment [35].

Moreover, a younger age [3, 5, 11, 12, 28, 35] was significantly associated with higher rates of return to work. Mustafah et al. [28] also acknowledged that older age was found to be a barrier to returning to work after a cardiac event, with each year increase in age decreasing the likelihood of returning to work by 8%).

Furthermore, ethnicity may indirectly contribute to return to work. Compared to injured workers from the Malay ethnic group, the Chinese and Indian ethnic groups were more likely to face a decrease or loss in wages upon returning to work [41]. The Chinese and Indians were more likely to work in the private sector while the Malays were more likely to work in the government sector, hence indirectly explaining the difference in income stability. However, a study has indicated that ethnicity did not significantly impact return to work [35].

Studies have shown mixed findings on whether education level contributed to return to work outcomes. Having fewer years in education was a barrier to return to work and having more years in education predicted return to work [36]. Interestingly, workers with lower education were more likely to return to work because they also stood a higher chance of facing reductions or even losses in their wages [41]. Meanwhile, a study found that education level or the number of years spent acquiring educational qualifications neither facilitated nor hindered return to work [36, 41].

Employment status is the ability to return to a recent activity (school, work, or pre-morbid condition) [25]. While one study conducted among injured workers with SCI found that employment status, either paid employment or self-employment, did not affect return to work outcomes [36] another similar study found that those who worked either part-time or full-time tended to have better return to work outcomes [12]. Meanwhile, the time of reassessment may contribute to better return to work prospects. When the duration of employment status was considered, employment status contributed to better return to work prospects based on the reassessment of patients with mild traumatic brain injury (mTBI) after six months [18]. The injured workers' level of functioning may have improved since the first month of injury, enabling better return to work outcomes six months post-injury.

Psychological and personal factors

Psychological well-being, including mental health and emotional state, impacted return to work processes. Improvements in psychological well-being, including lower levels of depression, anxiety, and stress, facilitated return to work [7] while poorer psychological health prevented return to work [13, 42]. In another study, injured workers' negative emotional states, measured by depression, anxiety, and stress levels, were lower at the work Maintenance phase compared to the Off-work phase and the work Re-entry phase. These results further corroborated another study's findings on psychological well-being concerning return to work outcomes [27] where having high negative emotional states impacted occupational competence. Hence, reducing return to work outcomes while having low negative emotional states led to more positive return to work outcomes.

Personal self-efficacy [42], self-esteem, self-confidence [7], motivation [4, 7], independence [7] and financial stability [12] were the personal factors found to contribute to return to work and that have been highlighted in previous studies. Nonetheless, a contrast in the findings was observed whereby Perceived Behavioural Control did not influence return to work outcomes [3]. A plausible explanation may be that injured workers undergoing treatment and recovering from their illnesses did not see the need for return to work, as they perceived that they were not fit enough. Spiritual and religious factors also improved return to work outcomes [13, 42].

Disease and treatment-related factors

Disease and treatment-related factors include the time between the onset of disease and the commencement of employment, the early diagnosis, the duration of living with the disease, health, pain, comorbid medical conditions, physical functioning, the presence of deficits, the severity of the injury, the type of injury, related symptoms, and medical leave.

The duration between the onset of the disease is a potential factor for return to work [36]. Early diagnosis of an illness and early appropriate rehabilitation intervention predicted better return to work outcomes than later stages of an illness (i.e., breast cancer) [41], stroke [12] and eye injury [31]. Living with SCI predicted better return to work outcomes [36]. A better perception of one's health was associated with better return to work outcomes [7, 26, 42] while a weaker perception of one's health in terms of disease and treatment was associated with poorer return to work outcomes [27]. Better pain tolerance was tied to injured workers' ability to return to work [7].

In contrast, higher pain intensity was linked to lower occupational performance, hindering injured workers from returning to work [23]. The support for this statement came from studying return to work in stages, whereby the ability of the injured workers to deal with pain at work was significantly better for employees during the work Maintenance phase compared to those during the work Re-Entry phase [26]. However, one study found that pain levels did not affect return to work [38].

Comorbidities influence RTW, given that hospitalisation for disease-related factors is required only for the past year [36] and when the injured worker has fewer than two comorbid conditions [19]. More than one comorbid medical condition was associated with poorer physical functioning. In support of physical functioning, better return to work outcomes were linked with proper physical functioning, including the injured worker's vitality [12, 26]. Better physical functioning was noted for injured workers in the Maintenance phase than those in the Off-work phase [26]. On the other hand, associated deficits, such as neurological deficits among patients with a thoracolumbar fracture hindered return to work [38].

Furthermore, the type and severity of the injuries also affected the injured workers' return process. The more severe the injury related to the disease, the lesser the likelihood of the injured employee returning to work [7]. Chan et al. [12]

reported Ischemic stroke to have better outcomes in terms of returning to work compared to haemorrhagic stroke.

As for the type of injury, mixed findings have been found in the literature. Workers with injuries to the upper limbs fared better at returning to work than workers with injuries to the upper limbs in general locations and multiple locations [4, 5]. However, one study found contradictory findings when RTW outcomes were measured based on returning to the same or different employer. Injured workers with injuries to upper or lower limbs and general injuries could return to work with the same employer. In contrast, those only with injuries to the upper limbs were able to return to work with a new or different employer [6].

Symptoms related to the disease and treatment also prevented injured workers from successfully returning to work. Fatigue or tiredness, numbness in the limbs, and loose stools were some related symptoms [13]. Finally, extended medical leave due to recovering from the disease also hindered injured workers from returning to work [13, 42]. In support of the finding that longer medical leaves predicted poorer return to work outcomes, the medical leave rate was lower at the work Advancement phase compared to the work Re-entry and Off-work phases when measured against different return to work phases [26]. Concerning long medical leaves, extended follow-up appointments also hampered efforts to return to work [42].

The duration of intervention, the nature of the rehabilitation program, the awareness of rehabilitation programs, and the compensation provided are some of the work rehabilitation factors injured employees face when deciding whether to return to work. Early management of symptoms and interventions can promote maximum recovery and increase the likelihood of returning to a functional baseline within two weeks to three months of injury [18].

Besides, a shorter intervention period between the onset of the illness or injury and the intervention, such as fewer than three months [4] and quicker and more intensive return to work or rehabilitation programs encouraged better return to work outcomes [3]. In contrast, more extended intervention periods, such as those of more than five months, hindered injured workers seeking return to work.

At times, injured workers and healthcare professionals (HCPs) lack the knowledge and awareness of appropriate interventions or rehabilitation/RTW programs [13]. Such a lack of knowledge and awareness dampens successful return to work outcomes. Compensation due to reductions or loss of wages, such as that provided by organisations, including Malaysia's SOCSO, was not found to influence return to work outcomes [38]. However, payment would facilitate successful return to work when compensation was provided in monetary form to injured workers undergoing rehabilitation programs and workers who were not eligible for other compensation schemes [3].

Work-related factors

Work-related factors that may impact return to work outcomes include the type of employer, the nature of the work, the ability to drive a modified vehicle, the type of

workplace injury, the employers' interest, assistance at work, employer and colleague support, the type of employment, and wage. Return to pre-injury or the same employer fostered return to work [6,7, 36]. However, one study did not find a return to the pre-injury employer to affect return to work outcomes [22] significantly. Besides returning to a pre-injury employer, returning to pre-injury jobs was also considered.

Similarly, mixed findings were found to return to pre-injury jobs. While one study found that returning to jobs worked before the workers' injury did not facilitate return to work outcomes [7], second study indicated that the nature of pre-morbid employment, such as that of a manual labourer, decreased the likelihood of return to work [38]. Generally, it is understood that less demanding work may encourage return to work compared to more demanding work [13]. Better facilitation to return to work is tied to the nature of the employer or job and the means of work commute. Improvements in commuting to the workplace via better transportation may explain better return to work outcomes. Driving a modified vehicle was found to facilitate return to work [36].

Also, contrasting findings have been found between injured workers suffering from occupational diseases and those suffering from commuting accidents concerning return to work outcomes [5, 6]. However, workplace injuries remain uncontested, those suffering from workplace injuries fared better at returning to work than injured employees suffering from occupational diseases and commuting accidents [5].

Employers interested in hiring or rehiring injured workers seeking return to work helped provide better return to work outcomes for employees seeking re-employment [4, 5]. Coupled with employers' interest in rehiring or hiring injured workers, assistance at work also helped injured workers experience a smoother process in returning to work. Injured workers frequently face challenges upon returning to work, and if these challenges are not dealt with, such problems at work could become obstacles that hinder them from returning to work [25].

Employer support and understanding in the form of medical benefits, flexible working hours, and modified job specifications contributed to better return to work outcomes [12, 24, 42]. Family [3] and colleague support [12, 42] were also imperative in encouraging injured workers to return to work. However, a study indicated that colleague support was a non-significant factor in successful return to work, but perceived discrimination by colleagues may discourage injured workers from returning to work [41].

The type of employment and, hence, the injured worker's wages are also related to return to work outcomes. For instance, employees employed in the government sector tended to receive more stable wages upon returning to work than those working in the private sector [41]. Thus, more positive return to work outcomes would be observed among injured workers when they received deductions or cuts in their paychecks, especially for those not working in the government sector. Such discrepancy highlights the need to look into possible support for injured workers employed in the private sector. Low financial resources may drive injured

workers to return to work [13]. Nonetheless, a study has found wages to be a non-significant factor affecting return to work outcomes [22].

Moreover, proper aeromedical assessment and clear guidelines for return to work assessment by the organisation are important factors in determining the fitness of a pilot to return to work [24].

VII. DISCUSSION

This literature review showed that the male gender, a (Andersen et al., 2011) younger age, employment in the government sector, more years spent in education, employment status, early diagnosis, the perception of one's health, pain tolerance, proper physical functioning, good psychological well-being, personal drive, and self-management, the ability to drive a modified vehicle, less demanding jobs, recovery from workplace injuries, and a supportive work environment were the critical factors for injured workers to venture into returning to work.

Conversely, increasing age, employment in the private sector, fewer years spent on education, a weaker perception of one's health, the presence of existing associated comorbidities and deficits, the severity of injuries, the symptoms related to the disease such as fatigue and loose stools, extended medical leave and follow-up appointments, weak psychological states, demanding jobs, discrimination from colleagues, recipients of compensation, and more extended intervention periods were the potential barriers that caused injured workers to refrain from returning to work.

Despite the mounting challenges preventing injured workers from returning to work, studies reported more than half of the injured workers successfully returned to work [5, 38]. Return to work allows injured workers to play meaningful roles in contributing to society and helps them use the resources given to them to live productive lives.

However, a measure of caution should be noted because workers who returned to work may do so due to boredom at home, the need to socialise at the workplace [42] or financial burdens [13, 42], stringent organisational policies [13] and social pressures [3]. Since Malaysia is a country comprising multicultural diversity, return to work factors should be studied considering ethnicity. For example, financial independence and personal self-efficacy are motivators for RTW among the Chinese ethnic group, while supportive employers are a motivator for return to work among the Malay ethnic group [42].

The factors influencing return to work in Malaysia can be compared with findings from other countries, as highlighted in the literature. Several common factors emerge across different contexts, while some factors may vary based on the specific socio-economic and cultural conditions of each country.

One common factor identified in the literature is the importance of physical and psychological factors in influencing return to work outcomes. Studies from Malaysia, such as, highlight the significance of age, gender, education level, and type of injury as predictors of successful return to employment [6]. Similarly, studies from other countries, such

as in India and Japan, emphasize the role of factors like modified Rankin scale, age, and job type in predicting RTW after knee replacement [9], stroke [10, 44], chronic pain [1, 16, 17] chronic back pain [40] and mental disorder [2, 14, 30]. These findings suggest that physical and health-related factors play a crucial role in determining the success of returning to work across different countries.

Social support is another factor that consistently emerges as influential in facilitating return to work. Studies from Malaysia emphasize the importance of employer commitment and intervention programs in improving return to work outcomes [6]. Similarly, studies from other countries, such as in the United States, highlight the significance of personal, environmental, and cancer-related factors in the experiences of cancer survivors returning to work [29, 20]. These findings indicate that social support from employers, colleagues, and healthcare professionals is crucial in supporting individuals during the RTW process.

Economic factors, such as wages, financial incentives, and job market conditions, are also identified as influential in return to work outcomes. While the specific impact of economic factors on return to work in Malaysia is not directly addressed in the available literature, studies from other countries, such as and Patinos, emphasize the role of education as an economic factor influencing returns on investment [34]. Economic conditions, including job market stability and social security systems, can influence the success rate of returning to work in different countries.

It is important to note that the specific factors influencing return to work may vary across countries due to differences in cultural, economic, and social contexts. Factors such as work-related difficulties, disability levels, and attitudinal obstacles may be influenced by country-specific factors. For example, studies from Malaysia, such as examination of bank risk in Malaysia, emphasize the importance of country-specific economic factors in understanding return to work outcomes [33].

Additionally, not enough studies have compared the current population to similar populations globally. Among injured workers with MSD, the local community had lower occupational competence linked with higher negative emotional states than an international population comprising injured workers from the United States, the United Kingdom, Canada, and Sweden [27]. The local people also had poorer physical and mental functioning in comparison to the international population ([26]). A meta-analysis could not be conducted, as the quantitative studies investigated in this paper defined return to work differently. For instance, the articles posited different durations of what constituted a successful return to work. Moreover, the documents used inconsistent employment statuses. For example, employment status could refer to part-time, full-time, self-employment, or a combination of all three.

VIII. CONCLUSION

In conclusion, the review identifies four key factors that contribute to a better understanding of the determinants of successful return to work in the Malaysian context: socio-

demographic factors, psychological and personal factors, disease and treatment-related factors, and work-related factors. These factors provide insights into the generalisability of the findings and help identify potential areas for further research.

Furthermore, future research is needed to investigate work and occupational safety in the manufacturing sector and to strengthen necessary procedures to curb the rising liabilities within the industry. Additionally, research should focus on solidifying the roles of healthcare professionals in assisting injured workers with return to work and increasing their awareness of return to work policies. Promptly informing employers of the current health statuses of injured workers can also be beneficial.

Moreover, conducting additional local comparative studies against an international population could provide valuable insight into RTW globally. This would help in gaining a firmer grasp of the disease, work-related challenges, and treatments that induce psychological, cognitive, and physical impacts on survivors of distinguished medical conditions and injuries. Such insights would assist relevant personnel in developing necessary interventions and rehabilitation for this group, ultimately enhancing RTW outcomes for injured workers.

References

- [1] Andersen, M., Ernst, C., Rasmussen, J., Ankjær, T., & Carreon, L. (2020). Predictive factors of successful RTW following discectomy. *Global Spine Journal*, 219256822096039.
- [2] Andersen, M., Nielsen, K., & Brinkmann, S. (2011). Meta-synthesis of qualitative research on RTW among employees with common mental disorders. *Scandinavian Journal of Work Environment & Health*, 38(2), 93-104.
- [3] Awang H, Mansor N, Rodrigo SKA. (2015). Work related injury and illness: Exploring the Return-to-Work Program in Malaysia. *Southeast Asian J Trop Med Public Health*. 46(6):1124-33
- [4] Awang H, Shahabudin SM, Mansor N. (2016). Return-to-Work Program for injured workers: Factors of successful return to employment. *Asia Pacific J Public Heal*. 28(8):694-702.
- [5] Awang, H., Tan, L., Mansor, N., Tongkumchum, P., & Eso, M. (2017). Factors related to successful RTW following multidisciplinary rehabilitation. *Journal of Rehabilitation Medicine*, 49(6), 520-520.
- [6] Awang, H. and Mansor, N. (2018). Predicting employment status of injured workers following a case management intervention. *Safety and Health at Work*, 9(3), 347-351.
- [7] Awang H, Tan LY. (2018). Impact of intervention on the psychological well-being being of injured workers. In: Pillay M, Tuck M, editors. *Occupational Health and Safety - A Multi-Regional Perspective*. Open access. IntechOpen;. p. 67-75.
- [8] Bakar, N., Zaki, S., Jaafar, M., Yusoff, M., Ghani, M., & Bakar, N. (2023). The impact of shariah non-compliant risk on stock return in Malaysia. *International Journal of Academic Research in Accounting Finance and Management Sciences*, 13(2).
- [9] Bardgett, M., Lally, J., Malviya, A., & Deehan, D. (2016). RTW after knee replacement: a qualitative study of patient experiences. *BMJ Open*, 6(2), e007912.
- [10] Bonner, B., Pillai, R., Sarma, P., Lipska, K., Pandian, J., & Sylaja, P. (2015). Factors predictive of RTW after stroke in patients with mild-moderate disability in India. *European Journal of Neurology*, 23(3), 548-553.
- [11] Cain, S., Churilov, L., Collier, J. M., Carvalho, L. B., Borschmann, K., Moodie, M., Thijs, V., Bernhardt, J., & AVERT Trialist Collaboration (2022). Factors associated with paid employment 12 months after stroke in A Very Early Rehabilitation Trial (AVERT). *Annals of physical and rehabilitation medicine*, 65(3), 101565.
- [12] Chan, Yean Koon and Tan, Kay Sin and Abdul Latif, Lydia (2021). Stroke in young adults in Malaysia: 1 year outcome and functional status. *Neurology Asia*, 26 (4). pp. 657-664.
- [13] Chow SL, Loh SY, Su TT. (2015). Perceived barriers and facilitators for RTW among colorectal cancer survivors: Malaysian healthcare professionals experience - A qualitative inquiry. *J Univ Occup Environ Heal*. 37(2):127-38.
- [14] Ervasti, J., Joensuu, M., Pentti, J., Oksanen, T., Ahola, K., Vahtera, J., ... & Virtanen, M. (2017). Prognostic factors for RTW after depression-related work disability: a systematic review and meta-analysis. *Journal of Psychiatric Research*, 95, 28-36.
- [15] Galizzi, M., Leombruni, R., Pacelli, L., & Bena, A. (2016). Injured workers and their RTW. *Evidence-Based HRM a Global Forum for Empirical Scholarship*, 4(1), 2-29.
- [16] Grant, M., O'Beirne-Elliman, J., Froud, R., Underwood, M., & Seers, K. (2019). The work of RTW. challenges of returning to work when you have chronic pain: a meta-ethnography. *BMJ Open*, 9(6), e025743.
- [17] Grant, M., Rees, S., Underwood, M., & Froud, R. (2019). Obstacles to returning to work with chronic pain: in-depth interviews with people who are off work due to chronic pain and employers. *BMC Musculoskeletal Disorders*, 20(1).
- [18] Hamzah, N., Muhamad, N. A., Hariri, F., Mazlan, M., Ramli, N., & Narayanan, V. (2021). A short-term longitudinal study on multi-dimensional outcomes following mild Traumatic Brain Injury in multi-ethnic Malaysia. 24(2), 1-10
- [19] Hoo, Q., Rohaida, S., & Zainal, M. (2014). Return intentions of Malaysia's diaspora: the push and pull factors. *Case Studies in Business and Management*, 1(1), 140.
- [20] Islam T, Dahlui M, Majid HA, Nahar AM, Taib NA, Su TT. (2014). Factors associated with RTW of breast cancer survivors: A systematic review. *Iran J Public Health*. 43(4):391-405.
- [21] Izadi, N., Jamshidi, S., Mehrdad, R., & Nasibi, E. (2020). Predictors of RTW in patients with occupational hand injury. *Hand surgery & rehabilitation*, 39(3), 218-222.
- [22] Lee, J., Choi, M., Park, S., Kim, H., & Lee, H. (2015). The effects of individual, occupational, and supportive factors on successful RTW using a structural equation model. *Annals of Occupational and Environmental Medicine*, 27(1).
- [23] Mohamad Sabri, M. Q., Judd, J., Roslan, N. F. A., & Che Daud, A. Z. (2022). Hand characteristics and functional abilities in predicting RTW in adult workers with traumatic hand injury. *Work (Reading, Mass.)*, 73(4), 1245-1253.
- [24] Mohammad, Z., Ibrahim, A. A., Ismail, R., & Abdul Manaf, M. R. (2022). The fate of a Military Pilot in Malaysia: Lingering on the ground after young stroke. *International Journal of Occupational Safety and Health*, 12(1), 54-58.
- [25] Moher, D., Liberati, A., Tetzlaff, J., & Altman, D. (2009). Preferred reporting items for systematic reviews and meta-analyses: the prisma statement. *Journal of Clinical Epidemiology*, 62(10), 1006-1012.
- [26] Murad MS, O'Brien L, Farnworth L, Chien C. (2013). Occupational competence and its relationship to emotional health in injured workers in RTW programs: A Malaysian study. *Scandinavian Journal Occupational Therapy*. 20:101-10.
- [27] Murad MS, O'Brien L, Farnworth L, Chien C-W. (2013). Health status of people with work-related musculoskeletal disorders in RTW programs: A Malaysian study. *Occupational Therapy Heal Care*. 27(3):238-55.
- [28] Mustafah, N. M., Kasim, S., Isa, M. R., Hanapiah, F. A., & Abdul Latif, L. (2017). Predicting RTW following a cardiac event in Malaysia. *Work (Reading, Mass.)*, 58(4), 481-488.
- [29] Nachreiner, N. M., Dagher, R. K., McGovern, P. M., Baker, B. A., Alexander, B. H., & Gerberich, S. G. (2007). Successful RTW for Cancer Survivors. *AAOHN Journal*.

- [30] Noordik, E., Nieuwenhuijsen, K., Varekamp, I., Klink, J., & Dijk, F. (2011). Exploring the return-to-work process for workers partially returned to work and partially on long-term sick leave due to common mental disorders: a qualitative study. *Disability and Rehabilitation*, 33(17-18), 1625-1635.
- [31] Omar, R., Anan, N. S., Azri, I. A., Majumder, C., & Knight, V. F. (2022). Characteristics of eye injuries, medical cost and return-to-work status among industrial workers: a retrospective study. *BMJ open*, 12(1), e048965.
- [32] Peters, S. and Johnston, V. (2016). Methods and tools used by healthcare professionals to identify barriers to return-to-work for workers with upper extremity conditions in australia. *Hand Therapy*, 22(1), 26-34.
- [33] Powell, R. (2017). New perspectives on bank risk in malaysia. *Cogent Economics & Finance*, 5(1), 1326217.
- [34] Psacharopoulos, G. and Patrinos, H. (2004). Returns to investment in education: a further update. *Education Economics*, 12(2), 111-134.
- [35] Ramakrishnan K, Chung TY, Hasnan N, Abdullah SJF. (2011). RTW after spinal cord injury in Malaysia. *Spinal Cord*. 49(7):812–6.
- [36] Ramakrishnan K, Mazlan M, Julia PE, Latif LA. (2011). RTW after spinal cord injury: Factors related to time to first job. *Int Spinal Cord Soc*. 49:924–7.
- [37] Salvador-Oliván JA, Marco-Cuenca G, Arquero-Avilés R. (2019). Errors in search strategies used in systematic reviews and their effects on information retrieval. *J Med Libr Assoc*. 107(2):210-221.
- [38] Shanmugam S, Bahrin ZAK, Atan Z, Ramiah R. (2014). Study on RTW following surgery on patients with thoracolumbar fracture. *Med J Malaysia*. 69(5):216–8.
- [39] Social Security Organisation Malaysia. 2020 Annual report (2021). Available from: www.perkeso.gov.my
- [40] Steenstra, I., Munhall, C., Irvin, E., Oranye, N., Passmore, S., Eerd, D. & Hogg-Johnson, S. (2016). Systematic review of prognostic factors for RTW in workers with sub acute and chronic low back pain. *Journal of Occupational Rehabilitation*, 27(3), 369-381.
- [41] Su TT, Azzani M, Tan FL, Loh SY. Breast cancer survivors : RTW and wage loss in selected hospitals in Malaysia. *Support Care Cancer*. 2018;26:1617–24.
- [42] Tan FL, Loh SY, Su T, Veloo VW, Ng LL. (2012). RTW in multi-ethnic breast cancer survivors – A qualitative inquiry. *Asian Pacific J Cancer Prev*. 13:5791–7.
- [43] Tan FY, Johari J, Sukery AFM. (2015). The influence of attitude, subjective norms, and perceived behavioural control on intention to RTW: A case of SOCSO's insured employees. *Kajian Malaysia*. 33(1):141–54.
- [44] Tanaka, H., Toyonaga, T., & Hashimoto, H. (2013). Functional and occupational characteristics predictive of a RTW within 18 months after stroke in japan: implications for rehabilitation. *International Archives of Occupational and Environmental Health*. 87(4), 445-453.
- [45] Vogel, N., Schandelmaier, S., Zumbrunn, T., Ebrahim, S., Boer, W., Busse, J., ... & Kunz, R. (2017). Return-to-work coordination programmes for improving RTW in workers on sick leave. *Cochrane Database of Systematic Reviews*, 2017(3).