Measurement Properties of the Return-to-Work Self-Efficacy Scale in Workers with Shoulder Injuries

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ABSTRACT

Purpose: The objective of this study was to investigate the measurement properties of the Return-To-Work Self-Efficacy (RTWSE) scale in injured Canadian workers. **Method:** We assessed internal consistency, construct-convergent, and known-groups validity of the RTWSE scale's total score and the pain management and re-injury self-efficacy (PRSE), supervisor support self-efficacy (SSE), and coworkers support self-efficacy (CWSE) domains in workers who had participated in a multidisciplinary rehabilitation program. Disability was measured by using the Disabilities of the Arm, Shoulder and Hand (DASH) scale. Spearman's ρ , odds ratios, and the area under the receiver operating characteristic curve (AUC) were used to examine the strength of the associations. **Results:** The data of 57 injured workers (43 men [75%], mean age 52 [11] y) were used for analysis. Internal consistency of the domains was satisfactory, with Cronbach's α s of 0.81, 0.87, and 0.92 for the CWSE, PRSE, and SSE, respectively. The PRSE domain correlated with the DASH ($r = 0.39$) and relevant domains of the RTWSE scale ($r_s = 0.47$ – 0.78). The PRSE was able to differentiate between working and non-working people (AUC = 0.72). Satisfaction with the actual support received at work and overall job satisfaction correlated significantly with the total score and CWSE and SSE domains (AUCs ≥ 0.70). **Conclusions:** The RTWSE showed satisfactory internal consistency and construct convergent and known-groups validity in workers with shoulder injuries.

Key Words: return-to-work; self-efficacy; shoulder; reproducibility of results.

RÉSUMÉ

Objectif : explorer les propriétés de mesure de l'échelle d'efficacité personnelle liée au retour au travail (EPRT) chez des travailleurs canadiens blessés. **Méthodologie :** les chercheurs ont évalué la cohérence interne, la validité du construit convergent et la validité du groupe connu du score total de l'EPRT, ainsi que les domaines de l'efficacité personnelle de la gestion de la douleur et des nouvelles blessures (EPGDNB), de l'efficacité personnelle du soutien du superviseur (EPSS) et de l'efficacité personnelle du soutien des collègues de travail (EPSC) chez les travailleurs qui avaient participé à un programme de réadaptation multidisciplinaire. Les chercheurs ont mesuré l'incapacité à l'aide de l'échelle des incapacités du bras, de l'épaule et de la main (DASH, d'après l'acronyme anglais). Ils ont examiné la force des associations au moyen de la corrélation de Spearman, des rapports de cotes et de l'aire sous la courbe (ASC) de la fonction d'efficacité du récepteur. **Résultats :** les chercheurs ont analysé les données relatives à 57 travailleurs blessés 43 hommes [75 %], âge moyen de 52 ans [11]. La cohérence interne des domaines était satisfaisante : le coefficient alpha de Cronbach était de 0,81 pour l'EPSC, de 0,87 pour l'EPGDNB et de 0,92 pour l'EPSS. Le domaine de l'EPGDNB était corrélé avec l'échelle DASH ($r = 0,39$) et les domaines pertinents de l'EPRT ($r_s = 0,47$ à $0,78$). L'EPGDNB a pu distinguer les personnes qui travaillent de celles qui ne travaillent pas (ASC = 0,72). La satisfaction à l'égard du soutien réel reçu au travail et à l'égard du travail global avait une corrélation significative avec le score total et avec les domaines d'EPSC et d'EPSS (ASC $\geq 0,70$). **Conclusion :** L'EPRT démontrait une cohérence interne, une validité du construit convergent et une validité des groupes connus satisfaisantes chez les travailleurs victimes d'une blessure à l'épaule.

A successful return to work (RTW) is one of the most important indicators of recovery for an individual who has incurred a work-related injury. Although physical disability plays a vital role in RTW, the impact of social and psychological factors such as perceived control and self-efficacy¹⁻⁴ should not be underestimated. Self-efficacy is a significant determinant of coping behaviour in people

with chronic pain.⁵⁻⁸ Self-efficacy is an individual's belief that she or he has the ability to successfully perform a certain task; the individual achieves better outcomes when self-efficacy beliefs are related to the same domain of functioning.^{9,10}

For example, although having a strong belief in one's ability to execute activities of daily living may result in

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improved outcomes in daily activities, it may not have an impact on one's ability to RTW. However, having high RTW self-efficacy will manifest in a successful actual RTW. The influence of self-efficacy on achieving a desired outcome in the broad context of health care has been studied for a couple of decades, but more recently the value of self-efficacy in the context of RTW has been given attention. At present, only a limited number of musculoskeletal self-efficacy scales for the work context are available: a 10-item Return-to-Work Self-Efficacy (RTWSE) scale by Brouwer and colleagues and a 19-item scale, the RTWSE-19, by Shaw and colleagues^{8,11} These scales were developed with Canadian claimants with work-related upper extremity disorders and low back pain⁸ and American injured workers with low back pain, respectively.¹¹

In contrast to general self-efficacy scales, the RTWSE scale is specific to work and addresses questions about pain management, work effectiveness and sustainability, and the ability to discuss limitations with colleagues and supervisors. This measure has potential value in identifying high-risk injured workers with musculoskeletal conditions who may need further interventions to facilitate RTW. In 2015, Brouwer and colleagues⁷ assessed the validity of the RTWSE scale in what appears to be the same sample of workers used in the original study. However, we are not aware of any independent studies on the validity of this scale in the English language. The further assessment of RTWSE in an independent sample of workers, specifically in patients with shoulder pathology, is expected to provide valuable information.

The objective of this study was to investigate the internal consistency, construct convergence, and known-groups validity of the RTWSE scale in a sample of injured workers with shoulder injuries who had participated in a multidisciplinary rehabilitation program. For internal consistency, we hypothesized a Cronbach's α coefficient of more than 0.70. For construct convergent validity, we expected a moderate association between pain management and re-injury self-efficacy (PRSE), which reflects pain management self-efficacy, disability, symptom duration, and readiness to RTW. We hypothesized that patients with higher disability and longer symptom duration would have a lower pain management self-efficacy score. For cross-sectional known-groups validity, we hypothesized lower pain management self-efficacy in patients who were unable to work than in those who were working. Similarly, we expected lower scores in surgical patients versus non-surgical patients because of the severity of pathology.

Finally, in terms of satisfaction, we anticipated a positive association between ability to obtain help from coworkers and supervisors and higher satisfaction with the actual support received at work from coworkers and supervisors. We expected that patients' report of overall job satisfaction would be positively associated with the total RTWSE score and all domains.

METHODS

Patient population

Study participants were Canadian workers who completed a multidisciplinary rehabilitation program funded by the Ontario Workplace Safety and Insurance Board (WSIB). All workers were aged 18 years or older with an active work-related shoulder injury and were referred for treatment by an orthopedic surgeon. Patients with cervical spine complaints and other coexisting peripheral joint involvement were excluded. Approval for the use of human subjects was obtained from the Research Ethics Board of the Sunnybrook Health Sciences Center.

Return-to-Work Self-Efficacy scale

The 10-item RTWSE scale measured self-efficacy for RTW at the time of discharge. This scale has three domains: the PRSE domain, which examines the ability to cope with pain with four questions; the supervisor support self-efficacy (SSE) domain, which explores the ability to obtain help from the supervisor with four questions; and the coworkers support self-efficacy (CWSE) domain with two questions, which examines the ability to obtain help from coworkers. The participants rated their confidence for each item on a 5-point scale ranging from 1 (not at all certain) to 5 (completely certain). Summative scores were calculated for the overall scores and the subscale scores.⁸ The structural and construct validity of the English version of the RTWSE scale has been supported in a sample of injured workers with low back and upper extremity problems with promising results in predicting work status at 6–12 months after injury.^{7,8} The RTWSE scale was collected at the final clinic assessment.

OUTCOME MEASURES

The outcome measures used for cross-sectional validation were an upper extremity disability measure, a scale that examined readiness for RTW, actual work status, and a satisfaction questionnaire that addressed the support received at work and overall job situation.

Measure of disability

We used the Disabilities of the Arm, Shoulder and Hand (DASH) scale to measure level of upper extremity disability.¹² The DASH has shown reliability and validity in patients with shoulder problems.^{13,14} The DASH was collected at the initial and final assessments.

Readiness for RTW

We used the Readiness for RTW (RRTW) scale, which addresses both working and non-working individuals (temporarily off work), to examine the readiness to RTW at different stages of work disability.¹⁵ This 22-item scale has 9 items for working individuals and 13 items for non-working individuals. Each item is scored on a 5-point ordinal scale (1 = strongly disagree, 5 = strongly agree). There are two underlying stages for working individuals:

uncertain maintenance (UM), which explores the worker's struggle to stay at work, and proactive maintenance (PM), which examines the coping mechanism and strategies to make work manageable in highly difficult situations that may cause a setback.

In the non-working population, we examined four stages: the pre-contemplation (PC) stage, which documents the absence of desire or planning for RTW, and the contemplation (C) stage, which involves considering RTW in the near future. The late stages are the preparation for action–self-evaluative (PA-S) stage, which measures the degree of readiness to RTW by finding strategies to make work manageable and by making an actual plan for RTW (e.g., having a return date) and the preparation for action–behavioral (PA-B) stage, which measures the degree of mental readiness and active involvement of the individual to build up strength to RTW.¹⁵ The RRTW scale has shown satisfactory construct validity for most of the stages of occupational rehabilitation in Norway¹⁶ and has shown an association with work outcome.¹⁷ The RRTW scale was collected at the final clinic assessment.

Measures of job support and satisfaction

Satisfaction with the level of support received from workmates and overall job satisfaction were measured by means of two Likert-based questions: “How satisfied are you with any support you receive from your workmates/supervisors?” and “Overall, how satisfied are you with your current job?” These questions are based on Karasek's demand–support–control model¹⁸ and have shown association with pain of musculoskeletal origin^{18–21} and disability in workers with shoulder injury.²² The satisfaction questions were completed at the final clinic assessment.

Statistical analysis

Sample size determination

To calculate the coefficient of internal consistency of a scale with three to five points, a sample size of 50 is considered sufficient.²³ For the correlation component, we estimated the sample size on the basis of a correlation coefficient of 0.40 between the RTWSE and the DASH. For α value of 0.05 ($Z_\alpha = 1.960$) and β value of 0.20 ($Z_\beta = 0.842$), the number of patients required was estimated at 47. Total $N = [(Z_\alpha + Z_\beta)/C]^2 + 3 = 47$, where $C = 0.5 * \ln [(1 + r)/(1 - r)] = 0.424$.²⁴ Thus, to have 50 patients with complete data, we recruited 60 patients to account for potential drop-outs and missing data.

Descriptive analysis and recovery

The information on demographics such as age, sex, level of education (six categories), affected side, dominant side involvement, symptom duration (months), and type of occupation (hospitality, construction, manufacturing, transportation, retail, and health care) was documented for descriptive purposes. Recovery was examined

by documenting change in the scores of DASH, active range of motion (ROM) in flexion and external rotation, and lifting and push–pull abilities over course of the treatment. Change over time was examined by paired Student *t*-tests.

Internal consistency

We examined the internal consistency reliability of the items of each domain and the domains in relation to each other using Cronbach α coefficients. An inter-item correlation of 0.70 was considered the cutoff for acceptable α coefficient.²⁵

Construct convergent validity

The presence of associations between the RTWSE scale and other theoretically derived measures were examined using Spearman ρ for ranked data. We examined the cross-sectional construct convergent validity of the total score and PRSE domain with the DASH, symptom duration, the late stages of readiness to RTW in the non-working group (PA-B and PA-S), and both stages of readiness to RTW in the working group (UM and PM) at the time of final clinic. Cohen's standard was used to evaluate the Spearman's correlation coefficients for strength of the relationships. Accordingly, correlation coefficients between 0.10 and 0.29 represent a small association, coefficients between 0.30 and 0.49 represent a medium association, and coefficients of 0.50 and above represent a large association or relationship.²⁶

We hypothesized a low or no correlation between the PRSE domain and the early stages of RRTW (PC and C) and a moderate positive correlation between the PRSE domain and the late stages of RRTW. In other words, higher self-efficacy was expected to be associated with a higher level of preparation for action (PA-S) and making actual plans for RTW (PA-B) in the non-working sample (temporarily off work). In the working sample, we hypothesized a negative correlation between the PRSE domain and the UM stage and a positive correlation between the PRSE domain and the PM stage (high self-efficacy would be associated with fewer reports of struggle to stay at work and better coping mechanisms to make work manageable).

Cross-sectional known-groups validity

We used logistic regressions to examine the ability of the total score and relevant domains of the RTWSE to differentiate between distinct subgroups of patients. The cross-sectional known-groups validity examined the difference between the working and non-working and the post-surgical and conservative treatment groups. We examined the relationships between satisfaction with actual support received at work with the SSE (ability to obtain help from the supervisor) and CWSE (ability to obtain help from coworkers) domains of the RTWSE. We also examined the relationship of the RTWSE scores with the

overall job satisfaction. We used odds ratios (three categories) and the area under the receiver operating characteristic curve (AUC; two categories) to quantify the strength of associations of the categorical data. In applied psychology and prediction of future behavior, AUC values of 0.70 and higher would be considered strong effects.²⁷

RESULTS

Table 1 shows the characteristics of the sample. Sixty patients participated in the study, of whom 3 had no job to return to or were being trained and therefore could not complete the RTWSE questionnaire. Of the remaining 57 patients (men, $n = 43$ [75%]; women, $n = 14$ [25%], mean age 52 [SD 11] years, range [min-max] 24–68), 18 patients received conservative treatment and 39 had rehabilitation after a shoulder surgery. Forty-five (79%) patients were working, and 12 (21%) were not working. Both the working and non-working groups showed a statistically significant improvement on the DASH and in range of motion and lifting and push-pull abilities ($p < 0.0001$).

Internal consistency

Internal consistency was satisfactory for all three domains, with Cronbach's α coefficients of 0.92, 0.87, and 0.81 for the SSE, PRSE, and CWSE domains, respectively. Cronbach's α for the full scale was 0.77.

Construct convergent validity

Table 2 shows the correlations between the PRSE domain and total score with the final DASH and RRTW domains. The lower PRSE score was associated with higher disability as measured by the DASH at the time of discharge ($r = 0.39$, moderate effect size [ES]). Symptom duration was not associated with the PRSE domain ($p > 0.05$).

As hypothesized, the early stages of RRTW that reflect PC and C did not correlate significantly with the RTWSE domains because the sample used for this study was actively involved in rehabilitation to facilitate a RTW ($p > 0.05$). The associations between the PRSE and other RRTW domains varied from moderate to large in the expected direction. A similar pattern was observed for the total RTWSE scores (Table 2).

In the non-working group, the PRSE had a positive correlation ($r = 0.59$, large ES) with PA-S, indicating that low self-efficacy to manage pain was associated with less readiness to RTW. Similarly, the PRSE was highly correlated with PA-B ($r = 0.78$, large ES), indicating that low self-efficacy to manage pain was associated with less mental readiness and less active involvement of the individual to build up strength to RTW. In the working group, the PRSE scores had an inverse moderate relationship ($r = -0.53$, large ES) with the UM stage and a low positive correlation ($r = 0.47$, medium ES) with the PM stage of

Table 1 Characteristics of Injured Workers ($n = 57$)

Characteristic	No. (%) [*]
Sex	
Female	14 (25)
Male	43 (75)
Age, y; mean (SD), range (min-max)	52 (11), 24–68;
Symptom duration, mo; mean (SD), range (min-max)	15 (22), 0.5–166
Affected side	
Left	40 (70)
Right	17 (30)
Dominant side involvement	
Yes	41 (72)
No	16 (28)
Education	
Grades 8–11	1 (2)
High school degree	7 (12)
1 or 2 y of college, no degree	18 (32)
College diploma	5 (9)
Bachelor's degree	18 (32)
Master's degree	8 (14)
Work status at time of discharge	
Working	45 (79)
Unable to work	12 (21)
Type of treatment	
Conservative	18 (32)
Post-surgical rehabilitation	39 (68)
Type of industry	
Construction	11 (19)
Manufacturing	4 (7)
Hospitality	8 (14)
Transportation	10 (18)
Health care	5 (9)
Retail	6 (11)
Other	13 (23)
Length of treatment, wk	
6–8	14 (25)
>8–10	6 (11)
>10–12	37 (65)
Support from colleagues and supervisors	
Satisfied	39 (68)
Neutral	12 (21)
Dissatisfied	6 (10)
Overall satisfaction with job	
Satisfied	35 (61)
Neutral	16 (28)
Dissatisfied	6 (11)

^{*}Unless otherwise indicated.

readiness to RTW. This shows that low pain management self-efficacy is associated with greater struggle to stay at work and fewer coping mechanisms and strategies to make work manageable.

Table 2 Cross-Sectional Associations between Total Score and Domains of RTWSE and Relevant Constructs

	PRSE	CWSE	SSE	Total RTWSE
Ranked data (Spearman correlation coefficients), $r(\rho)$				
Final DASH	-0.39 (0.003)			-0.35 (0.008)
RRTW (PA-B)	0.78 (0.005)			0.69 (0.019)
RRTW (PA-S)	0.59 (0.05)			0.66 (0.026)
RRTW (UM)	-0.53 (0.001)			-0.41 (0.004)
RRTW (PM)	0.47 (0.001)			0.40 (0.007)
Categorical data (logistic regressions)				
Work status at discharge*				
$\chi^2_1 (\rho)$	4.65 (0.031)			0.95 (0.33)
OR (CI 95%)	0.81 (0.68–0.98)			0.97 (0.90–1.03)
AUC (CI 95%)	0.72 (0.56–0.89)			0.61 (0.44–0.79)
Satisfied with support received at work†				
$\chi^2_1 (\rho)$		13.44 (0.001)	10.98 (0.001)	11.54 (0.001)
OR (CI 95%)		1.76 (1.30–2.38)	1.24 (1.09–1.41)	1.12 (1.05–1.20)
AUC (CI 95%)		0.74 (0.58–0.89)	0.70 (0.52–0.85)	0.72 (0.56–0.88)
Overall job satisfaction‡				
$\chi^2_1 (\rho)$	8.93 (0.003)	10.70 (0.001)	8.45 (0.001)	11.86 (0.001)
OR (CI 95%)	1.27 (1.08–1.49)	1.60 (1.20–2.12)	1.20 (1.06–1.35)	1.12 (1.05–1.20)
AUC (CI 95%)	0.66 (0.51–0.80)	0.70 (0.56–0.84)	0.73 (0.59–0.86)	0.73 (0.58–0.87)

Notes: Effect sizes for ranked data as measured by correlation coefficients: small, 0.10–0.29; medium, 0.30–0.49; and large, ≥ 0.50 . Effect sizes for categorical data were considered strong for AUC ≥ 0.70 .

*Examined for two categories: those working and those unable to work.

†ORs were calculated for 3 satisfaction categories (satisfied, neutral, dissatisfied); AUC values were calculated for 2 satisfaction categories (satisfied and neutral, dissatisfied).

RTWSE = Return-to-Work Self-Efficacy; PRSE = pain management and re-injury self-efficacy; CWSE = coworkers' support self-efficacy; SSE = supervisor support self-efficacy; DASH = Disabilities of the Arm, Shoulder and Hand; RRTW = Readiness for Return to Work; PA-B = prepared for action – behavioral; PA-S = prepared for action – self-evaluative; UM = uncertain maintenance; PM = proactive maintenance; AUC = area under the receiver operating characteristic curve.

Cross-sectional known-groups validity

Patients who were working at the time of discharge reported higher self-efficacy in the PRSE domain than those who were not working ($p = 0.03$, AUC = 0.72). There was no statistically significant relationship ($p > 0.05$) between the PRSE domain and type of treatment (conservative vs. post-surgical).

Lower SSE and CWSE scores (these domains reflect workers' ability to communicate their physical limitations and suggest ways to improve discomfort to supervisors and ability to ask for help from coworkers, respectively) were associated with lower satisfaction with the actual support received at work ($p = 0.001$, AUC ≥ 0.70). Overall job satisfaction was positively associated with the total score and all domains of RTWSE (AUC 0.66–0.73).

DISCUSSION

This study provides preliminary information on validity of the English version of the original RTWSE in an independent sample of injured workers with shoulder conditions. Overall, the sufficient internal consistency and moderate to high correlations of the RTWSE with the theoretically driven constructs in the expected directions is promising.

Internal consistency

The RTWSE scale showed sufficient internal consistency in patients with shoulder pathology. The SSE domain had the highest α coefficient at 0.92, and the CWSE domain had the lowest at 0.81. The original study⁸ reported a similar pattern, with the SSE having the highest Cronbach's α at 0.88 and CWSE having an α of 0.66 at 1-month follow-up, which increased to 0.93 and 0.79 at 6 months, respectively. It may be of note that the high Cronbach's α s of 0.92 and 0.93 found in our study and in the original study may indicate a redundancy of the questions, especially for a scale consisting of only four questions.

Construct convergent validity

The moderate associations between the SE total score and the PRSE (ability of the worker to manage pain) with the DASH score support our hypothesis. Previous research has shown that self-efficacy is associated significantly and negatively with pain-related disability in patients with chronic pain.^{28–30} These studies however, have not reported the strength of association and have based their findings on statistical significance.

In relation to readiness to RTW, the PRSE was moderately correlated with the worker's PM in the working group. Our expectations with respect to correlations between PRSE and PA-B and between PA-S and UM were over-met. The presence of high correlations with large effect sizes between the PRSE domain and the late stages of readiness to RTW indicate that pain management self-efficacy and the mental readiness to and active involvement in RTW are highly correlated in injured workers who are not working. In the working sample, struggle to stay at work and coping or strategy mechanisms (UM) were highly correlated as well.

The lack of relationship between the PRSE and symptom duration was not expected, because longer symptom duration is expected to affect pain management negatively. In the original study by the developers,⁸ the PRSE was correlated with the disability duration at a low level ($r = 0.18$ at 1 month and $r = 0.23$ at 6 months). Lack of variability of symptom duration in this study was related to the prompt referral for rehabilitation and may explain some of these findings.

Cross-sectional known-groups validity

As hypothesized, the PRSE could differentiate between working and non-working people ($AUC = 0.72$), indicating that self-efficacy in pain management played a role in the actual ability to work. The SSE and CWSE domains and total SE score showed an ability to differentiate between different levels of satisfaction expressed by workers and the actual support they received at work ($AUC \geq 0.70$).

Similarly, the SSE and CWSE domains and the total RTWSE score were able to predict overall job satisfaction ($AUC \geq 0.70$). The impact of job satisfaction scores on work-related compensation status and recovery has been well documented,^{22,31,31-33} and the positive association between satisfaction and the RTWSE was anticipated. Low SSE and CWSE scores reveal suboptimal satisfaction with the support received at work and may assist in identifying workers with negative outcomes or unsustainable RTW efforts.

To date, the original RTWSE has been validated in Brazilian Portuguese³⁴ and in English⁷ and Dutch by the developers of the scale.^{5,35} Our study provides an independent validation of the original RTWSE scale in the English language. This information is expected to be specifically valuable to clinics at which injured Canadian workers with an active WSIB claim are examined and treated.

The overall implications of this study for rehabilitation staff is the ability of the RTWSE domains to differentiate between different levels of disability, work status, stages of RTW readiness, and job satisfaction. By identifying high-risk patients such as those who are unable to work, have less actual support, and are less satisfied with their occupation, clinicians and employers can target workers who would benefit from more specific RTW interventions

such as pain management, coping strategies, or job interventions that improve levels of self-efficacy. By changing modifiable factors associated with self-efficacy such as autonomy and stress, RTW interventions will be more successful.³⁶ Kreitner and Kinicki highlighted that more resilient self-efficacy beliefs can be achieved by setting personal, dynamic, challenging, and attainable goals.³⁷ Self-efficacy can be improved by ensuring that job demands match the employee's abilities, providing mentorship and role modeling, showing confidence in employees succeeding at a particular task, and, most important, setting personal, realistic goals that match the level of the worker's self-efficacy.³⁷

Our results should be interpreted in light of following limitations. The sample size of participants and particularly of women was relatively small and included individuals with an active WSIB claim; this might limit the generalizability of our findings to injured workers. Although the study was longitudinal in nature, the data on RTWSE were collected once to examine cross-sectional associations with other constructs at the time of discharge. Ideally, future study designs should examine larger and more diverse populations. Further assessment of the longitudinal validity of the RTWSE will add to the body of the literature in terms of capturing change in the level of self-efficacy that could occur as a result of treatment.

CONCLUSIONS

The RTWSE showed satisfactory internal consistency and construct convergent and known-groups validity in relation to level of disability, readiness to work, actual work status, and job satisfaction in workers with shoulder injuries.

KEY MESSAGES

What is already known on this topic

There is a significant body of knowledge on the impact of self-efficacy in patients with chronic pain. There is minimal information on validity of the Return to Work Self-Efficacy (RTWSE) scale, which measures the physical aspect of self-efficacy in the context of return to work in Dutch and Brazilian Portuguese with no independent studies in the English-speaking population.

What this study adds

This study provides preliminary information on the validity of the RTWSE in an independent sample of workers with shoulder injuries. Sufficient internal consistency and moderate to high correlations with the theoretically driven constructs in the expected directions is promising and support the use of this scale in clinical settings and specifically in workers with an active work-related claim.

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