

Published Scientific Evidence: PGAP® Peer-Reviewed Literature
(Includes Workers' Comp and Disability Claims)

2013-2022 Publications

Sullivan, M.J.L., Timothy H. Wideman, Nathalie Gauthier, Pascal Thibault, Tamra Ellis and Heather Adams (2022). Risk-targeted behavioral activation for the management of work disability associated with comorbid pain and depression. BMC 2022 23:219.

Yamada, K., Adams, H., Ellis, T., Clark, R., Sully, C., Sullivan, M.J.L. (2020). Reductions in fatigue predict occupational re-engagement in individuals with workrelated musculoskeletal disorders. Journal of Occupational Rehabilitation, 30, 135–145.

Sullivan, M.J.L, Adams, H., Yamada, K., Kubota, Y., Ellis, T., Thibault, P. (2020). The relation between perceived injustice and symptom severity in individuals with major depression: A cross-lagged panel study. Journal of Affective Disorders, 274, 289–297.

Yamada, K., Adams, H., Ellis, T., Clark, R., Sully, C., Sullivan, M.J.L. (2020). Fatigue adds to the burden of disability associated with musculoskeletal pain. Journal of Occupational Rehabilitation, 30, 135–145.

Sullivan, M.J.L., Adams, H., Ellis, T., Clark, R., Sully, C., Thibault, P. (2017). Treatment-related reductions in catastrophizing predict return to work in individuals with post-traumatic stress disorder. Journal of Biobehavioral Research, DOI: 10.1111/jabr.12087.

Adams, H., Thibault, P., Ellis, T., E. Moore, E., Sullivan, M.J.L. (2017). The relation between catastrophizing and occupational disability in individuals with major depression: Concurrent and prospective associations. Journal of Occupational Rehabilitation, 27, 405-412.

Sullivan, M.J.L., Adams, H., Ellis, T. (2013). A Psychosocial Risk-Targeted Intervention to Reduce Work Disability: Development, Evolution and Implementation Challenges. Psychological Injury and Law, 6: 250-257.

Summary of 2005-2012 Publications

Publication	Abstract	Synopsis	Key Points				
<p>Sullivan, M.J.L., Adams, H., Ellis, T.</p> <p>Journal of Cognitive Psychotherapy. Volume 26, Number 2, 2012.</p> <p>Targeting Catastrophic Thinking to Promote Return to Work in Individuals with Fibromyalgia.</p>	<p>A sample of 30 individuals with Fibromyalgia (FM) participated in this study. We compared the outcomes of PGAP with individuals with FM to a sample of individuals who were chronically work-disabled due to low back pain (LBP). The interventionists in this study were occupational therapists who had completed the two-day PGAP skills training workshop. Both groups (FM and LBP) were matched on age, sex, pain severity and duration of work absence (approximately 2 1/2 years).</p> <p>Of the individuals who met inclusion criteria (e.g., risk factor scores above the 50th percentile), 83% of individuals with FM agreed to participate. All participants with FM completed 10 sessions of treatment. These results suggest that PGAP is considered an acceptable intervention for the majority of individuals with FM.</p>	<p>Compared to individuals with LBP, individuals with FM showed less reduction in pain severity and less change in perceived disability. Individuals with FM were also less likely to return to work (23%) than individuals with LBP (50%). The return to work rates for individuals with LBP are similar to previous studies of PGAP with individuals with long standing work disability.</p> <p>Although the return to work rates for individuals with FM might appear modest, it is important to consider that these individuals were work- disabled for more than two years.</p> <p>Epidemiological studies suggest that following two years of work disability, the probability of return to work is less than 2%.</p>	<p>Chronically work disabled 2 ½ years</p> <p>1 year follow-up results</p> <p>Returned to Work:</p> <table border="0"> <tr> <td>Low Back Pain</td> <td>50%</td> </tr> <tr> <td>Fibromyalgia</td> <td>23%</td> </tr> </table>	Low Back Pain	50%	Fibromyalgia	23%
Low Back Pain	50%						
Fibromyalgia	23%						

<p>Michael J.L. Sullivan, Heather Adams</p> <p>Physiother Can. 2010; 62:180 - 189.</p> <p>Psychosocial Treatment Techniques to Augment the Impact of Physiotherapy Interventions for Low Back Pain</p>	<p>The study examined the profile of physical and psychosocial changes that occur in physiotherapy intervention when patients also participate in a psychosocial intervention. The psychosocial intervention, delivered by physiotherapists, was designed to target catastrophic thinking, fear of pain, perceived disability, and depression. Methods: The study sample consisted of 48 individuals referred for the rehabilitation treatment of disabling back pain.</p> <p><u>Results:</u> Patients who participated in the psychosocial intervention in addition to physiotherapy showed significantly greater reductions in pain catastrophizing, fear of movement, and depression than patients who received only the physiotherapy intervention. Reductions in psychosocial risk factors contributed to reduced use of the health care system, reduced use of pain medication, and improved return-to-work outcomes.</p> <p><u>Conclusion:</u> The findings of the present study suggest that a psychosocial intervention provided by physiotherapists can lead to meaningful reductions in psychosocial risk factors for pain and disability and may contribute to more positive rehabilitation outcomes.</p>	<p>The most marked differences between the two groups were on measures of psychosocial variables: patients in the Physio Plus PGAP group showed significantly greater reductions in pain catastrophizing, fear of movement, and depression than did patients who received the physiotherapy intervention only.</p> <p>The present findings suggest that adding techniques targeting psychosocial risk factors can augment the impact of physiotherapy interventions in meaningful ways. Reductions in depressive symptoms accounted for group differences in post-treatment use of health care services. Reductions in fear of movement accounted for group differences in the continued use of pain medication during the 12 month follow-up period.</p> <p>Reductions in all psychosocial variables accounted for group differences in rates of return to work. The latter finding is consistent with previous research showing that reductions in catastrophic thinking, fear of movement, and depression may be key factors contributing to return to work in individuals with musculoskeletal conditions.</p>	<p>Subacute (injured 4-12 wks)</p> <p>Work disabled clients with Low Back Pain</p> <p>1 year follow-up results:</p> <p>Returned to Work:</p> <p>PGAP and Active PT 87%</p> <p>Active PT only 62%</p> <p>Treatment Reduction:</p> <p>PGAP and Active PT 79%</p> <p>Active PT only 50%</p> <p>Still using Medication:</p> <p>PGAP and Active PT 33%</p> <p>Active PT only 62%</p>
<p>Adams, H., Ellis, T., Stanish, W.D., Sullivan, M.J.L. 2007</p> <p>Journal of Occupational Rehabilitation, 17, 305 - 315.</p> <p>Psychosocial Factors Related to Return to Work Following Rehabilitation of Whiplash Injuries.</p>	<p>The study examined the effects of pain chronicity on the responsiveness of psychosocial variables to intervention for whiplash injuries. Methods Participants (N = 75) were work disabled patients with a diagnosis of Whiplash Grade II and were clients in a 10-week community-based, psychosocial intervention aimed at facilitating return to work. Individuals were classified as subacute (4–12 weeks; N = 25), early chronic (3–6 months; N = 25), and chronic (6–18 months; N = 25). Patients in the three groups were matched on sex (13 men, 12 women) and age (± 2 years).</p> <p><u>Results:</u> Individuals in the chronic group, compared to individuals in the subacute or early chronic groups, had significantly more elevated pre-treatment scores on measures of pain, catastrophizing, and fear of movement.</p>	<p>One of the main findings of this study was that chronicity was associated with a more severe psychosocial risk profile. Individuals who were work disabled for more than 6 months began treatment with higher scores on measures of pain catastrophizing and fear of movement/re-injury than individuals who were work disabled for less than 6 months.</p> <p>The findings emphasize the importance of early intervention and the need to develop strategies that specifically target disability beliefs in patients with whiplash injuries.</p>	<p>Returned to work:</p> <p>Subacute (4-12 weeks) 80%</p> <p>Early chronic (12 weeks-6months) 72%</p> <p>Chronic (Greater than 6 months) 32%</p>

<p>Sullivan M.J.L., Adams, H., Rhodenizer T, Stanish W. 2006</p> <p>Physical Therapy; 86: Pages 8-18.</p> <p>A psychosocial risk factor targeted intervention for the prevention of chronic pain and disability following whiplash injury.</p>	<p>The objective of this study was to determine whether the addition of a psychosocial intervention improved return to work rates beyond those associated with participation in a functional restoration physical therapy intervention. Subjects who had sustained whiplash injuries participated in the Progressive Goal Attainment Program (PGAP), which is a 10 week psychosocial intervention program that aims to increase activity involvement and minimize psychological barriers to rehabilitation progress.</p> <p><u>Subjects and Methods:</u> A sample of 60 subjects enrolled in a functional restoration physical therapy intervention were used as a historical cohort comparison group. Subjects who received the functional restoration physical therapy intervention were compared with a sample of 70 subjects who received PGAP in addition to physical therapy. Discussion and Conclusion. The findings suggest that a psychosocial risk reduction intervention can be an effective means of improving function and facilitating return to work in people who are at risk for prolonged pain-related disability.</p>	<p>Preliminary findings suggest that a psychosocial risk factor-targeted intervention in combination with physical therapy can lead to significant increases in the probability of return to work following whiplash injuries.</p> <p>Findings further suggest that front-line rehabilitation professionals can develop the skills necessary to effect significant reductions in psychosocial risk factors for prolonged pain and disability.</p> <p>The addition of the PGAP had most pronounced impact (compared with physical therapy alone) on the subgroup of subjects who scored in the risk range on all 3 psychosocial risk factor measures. The combination of psychosocial intervention with physical therapy may emerge as a viable and cost-effective approach for the prevention of prolonged pain and disability following musculoskeletal injury.</p>	<p>Chronic (Greater than 6 months)</p> <p>Returned to work:</p> <p>PGAP and Active PT 75%</p> <p>Active PT 50%</p> <p>Returned to work (Clients who had severe psychosocial profiles)</p> <p>PGAP and Active PT 57%</p> <p>Active PT 25%</p> <p>*These data suggest that people who have severe psychosocial risk profiles are particularly resistant to treatment and that the probability of return to work can be significantly augmented by the addition of a psychosocial risk factor-targeted intervention.</p>
<p>Sullivan, M.J.L., Ward, L.C., Tripp, D., French, D., Adams, H., Stanish, W.D. (2005).</p> <p>Journal of Occupational Rehabilitation: 15: Pages 377-392.</p> <p>Secondary prevention of work disability: community-based psychosocial intervention for musculoskeletal disorders.</p>	<p>One objective of the research was to examine the degree to which psychological risk factors could be reduced through participation in a community-based psychosocial intervention for work-related musculoskeletal disorders. A second objective was to examine whether psychosocial risk reduction had an effect on the probability of return to work.</p> <p><u>Methods:</u> Participants were 215 Workers Compensation Board claimants with work-related musculoskeletal disorders who had been absent from work for an average of approximately 7 months (M = 28.8 weeks, range = 4-100 weeks) and were referred to a community-based multidisciplinary secondary prevention program in Nova Scotia, Canada.</p> <p><u>Conclusions:</u> Results of the study provide further evidence that risk factor reduction can impact positively on short term return to work outcomes.</p>	<p>Secondary prevention programs are designed to minimize risk factors for prolonged pain and disability. At an average of 7 months post-injury, the sample included in the present study would be considered at high risk for continuing along a trajectory of chronic work- disability. Through the reduction of psychosocial risk factors, the objective of the PDP Program was to prevent further disability.</p> <p>Research joins a growing literature suggesting that psychosocial risk factor reduction is associated with higher probability of return to work outcomes. Participation in the PDP Program was associated with significant reductions in all psychosocial risk factors assessed and, reductions in these risk factors significantly predicted return to work.</p>	<p>Chronic (Average 7 months work disabled)</p> <p>Returned to work:</p> <p>PDP and Active PT 63.7%</p> <p>Program acceptance rate 89%</p> <p>Significance: Outcomes of rehabilitation programs for work disability might be improved by incorporating interventions that specifically target catastrophic thinking. Community-based models of psychosocial intervention might represent a viable approach to the management of work disability associated with musculoskeletal disorders.</p>

