ORIGINAL RESEARCH

Passive coping is a risk factor for disabling neck or low back pain

[1]Dr. Yesh Veer Singh, [2]Dr. Dilip Kumar Singh, [3]Dr. Anil Kumar Gupta

[1]Assistant Professor, Department - Physical Medicine and Rehabilitation, Era's Lucknow Medical College and Hospital , Lucknow, Uttar Pradesh, India
[2]Assistant Professor, Department- General Surgery, Raj Shree Medical Research Institute and Hospital, Bareilly, Uttar Pradesh, India
[3]Professor, Department - Physical Medicine and Rehabilitation, King George's Medical University (KGMU) Lucknow, Uttar Pradesh, India

Corresponding author
Dr. Anil Kumar Gupta
Professor, Department - Physical Medicine and Rehabilitation, King George's Medical University (KGMU) Lucknow, Uttar Pradesh, India

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ABSTRACT
Background: The majority continue with their daily activities with minimal interference from their pain.To evaluate passive coping as a risk factor for disabling neck or lower back pain. **Materials & methods:** A total of 50 individuals with non-disabling neck and/or low back pain were enrolled. Participants were followed 6 and 12 months after the index survey. Coping was measured. The result was analysed using SPSS software. **Results:** Individuals who reported a moderate level of passive coping strategies were 5.26 (95% CI=1.50–14.8) times more likely to develop disabling pain than people reporting a low level of passive coping. **Conclusion:** Passive coping is a strong and independent predictor of disabling neck and/or back pain.
Keywords: back pain, neck pain, passive coping.

INTRODUCTION

Each year around 7% of the UK adult population consult their GP with low back pain and, for the majority, this is of non-specific origin.[1,2] The costs associated with the condition are considerable. It is estimated that in the UK the economic burden of back pain in terms of healthcare costs and lost productivity is around £12 billion per annum,[3] and the majority of these costs are attributable to the subset of individuals with persistent or recurrent disabling symptoms. It is generally perceived that, of those patients with acute low back pain, most cases resolve spontaneously and only a small proportion experience chronic symptoms. However, recent studies have shown that around half of patients who present with low back pain in primary care still experience pain and disability 3 months after their initial consultation. [4]

Lower back pain is ranked first as a cause of disability and inability to work, and expected to affect up to 90% of the world's population at some point in their lives.[5]Lower back pain is a complex condition, influenced by a number of factors and often a challenge when trying to identify any singular cause or even a single major factor.[6] The annual first time incidence of lower back pain is 5% , and the annual prevalence between 15 and 63% (i.e. those suffering at time of questioning).[7,8]Prospective studies demonstrate that low back problems do not display a six-week spontaneous recovery pattern, as was once believed. [9]The condition is regularly seen to worsen over time, becoming a chronic disorder, influenced by both physical and psychosocial factors. [10,11]Coping is important in stress and adjustment. Individuals with pain use a variety of coping strategies on a daily basis. Brown and Nicassio (1987) conceptualize pain coping as active or passive in nature. Active coping involves strategies requiring the person to take responsibility for pain management and making attempts to control the pain or to function in spite of it. Passive coping behaviour involves giving responsibility for pain management to an outside source or allowing other areas of life to be adversely affected by pain. [12]Hence, this study was conducted to evaluate passive coping as a risk factor for disabling neck or lower back pain.

MATERIALS & METHODS

A total of 50 individuals with non-disabling neck and/or low back pain were enrolled. Participants were followed 6 and 12 months after the index survey. Coping was measured. The ChronicPain Questionnaire was used to measure the presence of disabling neck and/or low back pain. Cox proportional hazards regressionanalyses to investigate the role of passive coping in the development of disabling pain while controlling for confounders. The data was recorded. The result was analysed using SPSS software.

RESULTS

Adjusting for confounding did not increase the association between active coping and onset of disabling pain. Individuals who reported a moderate level of passive coping strategies were 5.26 (95% CI=1.50–14.8) times more likely to develop disabling pain than people reporting a low level of passive coping. Individuals who reported high passive coping were 6.89 (95% CI=2.16–18.5) times more likely to develop disabling pain.

Table 1: Relationship between passive coping and the development of disabling neck and/or low back pain

Variable	Crude HRR	Adjusted HRR	95% confidence interval
Passive coping			
Low	1.00	1.00	
Moderate	4.92	5.26	1.50-14.8
High	6.00	6.89	2.16-18.5

DISCUSSION

The influence of physical activity in relation to lower back pain has been observed as associative, non-associative and even protective.[13-15] Jacob and colleagues identified the specific factors of high occupational activity (lifting and loading) and low perception of general health as contributory in a general population.[14]Hestbaek et al. noted how the so-called protective effect of a sedentary occupation was lost once physical activity is undertaken.[16] But still no firm associations between physical activity and lower back pain have been made. It is proposed by Adams (2002), that a 'U shaped' curve best describes the correlation between lower back pain and physical activity. [17]Sedentary lifestyles, as well as extremely active lifestyles are associated with increased prevalence while moderate activity seems protective.[18] It is not implied that inactivity causes lower back pain, nor that high activity is a result of lower back pain, but studies have indicated that engaging in higher intensities of physical activity, particularly with a history of lower back pain is associated with lower back pain, or extremity of flexion and/or load in the lumbar region.[19,20] In contrast, once lower back pain has occurred, low activity levels have been associated with prolonging suffering and lengthening time to recovery. [14,15,21]Hence, this study was conducted to evaluate passive coping as a risk factor for disabling neck or lower back pain.

In the present study, adjusting for confounding did not increase the association between active coping and onset of disabling pain. Individuals who reported a moderate level of passive coping strategies were 5.26 (95% CI=1.50–14.8) times more likely to develop disabling pain than people reporting a low level of passive coping. A study by Mercado AC et al, from a random sample of adults, we formed a cohort of individuals with non-disabling neck and/or low back pain (n=571). Participants were followed 6 and 12 months after the index survey. Coping was measured with the Vanderbilt Pain Management Inventory. Those using moderate to high levels of passive coping strategies were at an over five-fold increased risk of developing disabling pain (Moderate: HRR=5.19, 95% CI=1.78-15.1; High: HRR=6.80, 95% CI=2.36-19.6). Active coping was not found to be a significant risk factor for disabling neck and/or back pain. Passive coping is a strong and independent predictor of disabling neck and/or back pain. [22]

In the present study, individuals who reported high passive coping were 6.89 (95% CI=2.16–18.5) times more likely to develop disabling pain. Another study by Carroll L et al, pain coping strategies can be active or passive. Previous studies have examined these strategies separately, however individuals use combinations of both types of coping strategies. They examined the associations between sociodemographic, pain and health-related factors and combinations of active and passive strategies in a general population random sample of 1,131 adults. Individuals reporting neck or low back pain during the past 6 months are the subjects of this report (n = 644). Multinomial logistic regression suggests that disabling pain was highly associated with passive coping regardless of active coping. Lower education was associated with the combination of low levels of active and high levels of passive coping. Individuals with better self-reported general health were less likely to use high levels of passive coping regardless of their active coping. They conclude that high levels of passive coping are strongly associated with disabling pain and that there is no evidence of an association between pain severity and active coping.[23]Current rehabilitation practices promote the use of active coping strategies, but it is unclear how much explicit direction is provided regarding passive coping strategies. In the current study, active coping did not have a significant relationship with the onset of disability. However, the strong link identified in the

current study between passive coping and disability would suggest that an important component of treatment programs might be the control of passive coping strategies. Education of individuals in pain may also be of benefit in order to teach them to identify maladaptive strategies and how to decrease their use. If further studies demonstrate that teaching individuals to decrease their reliance on passive coping strategies has a beneficial effect on their pain and their functioning, programs need to be developed that specifically focus on decreasing passive coping strategies. However, further treatment studies are required to identify key treatment components that can serve this purpose and to assess the impact of decreased use of passive coping strategies. To date, Cognitive Behavioural Therapy (CBT) has been widely used as an intervention strategy with chronic painpopulations. Given the focus of CBT on a person'sperceptions and behaviour, it would seem to fit as an intervention that can challenge a passive approach to coping. Research has supported its effectiveness in promoting improved functioning in individuals with pain.[24]

CONCLUSION

Passive coping is a strong and independent predictor of disabling neck and/or back pain. This strong relationship identifies passive coping as a marker for risk of disability and can allow for the identification of individuals at risk and in need of intervention to aid in improving their overall adjustment.

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