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Work-Related Quality of Life in A Client Presenting with A Musculoskeletal Disorder: A Case Report

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Abstract **Case Report**

The measurement of Work-Related Quality of Life (WRQoL) has become a vital evidence-based measure to understand perceived quality of working life. This case report explores the evaluation of WRQoL in a client presenting with a musculoskeletal disorder. It outlines the design and execution of the WRQoL scale as well as the outcomes of the occupational health physiotherapy assessment and treatment sessions. The findings indicated that General Well-Being (GWB) and Home-Work Interface (HWI) are in the lower range. Therefore, further attention in these subscales is warranted to improve the client's WRQoL.

Keywords: Work-Related, Quality of Life, Musculoskeletal Disorder.

INTRODUCTION

Work-Related Quality of Life (WRQoL) is an evidence-based measure of improvements to perceived quality of working life [1]. It is associated with a range of benefits and provides key information required for assessing employee contentment for use in planning interventions, monitoring workforce experience and assessing the effect of organisational change [1]. The Quality of Working Life (QoWL) is a theoretical concept that aims to capture the essence of an individual's work experience in the broadest sense [2]. The QoWL of an individual is influenced by their direct experience of work and by the direct and indirect factors that affect this experience, such as job satisfaction and other factors that broadly reflect life satisfaction and general feeling of well-being [2]. Musculoskeletal disorders of the workplace include acute, cumulative and chronic injuries or illnesses of the muscles, nerves, tendons, entheses and ligaments caused by mechanical stress, strain, sprain, vibration, inflammation or irritation [3]. The incidence, cost, duration and degree of disability secondary to work-related musculoskeletal disorders are increasing and although these entities are frequently encountered, employers often provide minimal investment for their evaluation and treatment [4]. Acute injuries are caused by a strong and short-term heavy load, leading to sudden failure in structure and function, and cumulative and chronic injuries are caused from permanent overload, leading to continuous increase in pain and dysfunction [5-6].

CASE

Subjective examination

A 44-year-old female employee self-referred to the occupational health physiotherapy clinic with a complaint of bilateral shoulder pain. Her symptoms were present for 12 months but had increased in the previous month. She did not seek treatment earlier as she thought her symptoms would settle but it did not. Her pain is localised on the anterior aspect of both shoulders and she reports a 5/10 discomfort on the Visual Analogue Scale (VAS). She reported that the right shoulder pain is slightly worse than the left. Her discomfort is increased with overhead movements and she has recently been experiencing pain in the evening after work. Her pain is not keeping her awake during the night however she is worried it might get worse and limit her activities of daily living. She does not report any general health concerns or any history of previous injuries. She undertakes general exercises throughout the week which includes 10-15 minutes of Yoga each morning, outdoor swimming, running or fitness classes but these are not consistent. Her job is manual in nature and requires lifting, carrying and repeated overhead movements. The client denied having any red flag signs that would warrant onward referral to a medical practitioner or

emergency department. With no contraindications identified an objective examination was planned.

OBJECTIVE EXAMINATION

The first tests completed were clearing tests of the cervical and thoracic spine to rule out referred pain. The next tests completed were shoulder flexion and abduction active range of motion. The client could complete both movements to 170 degrees bilaterally and at this range it reproduced her anterior shoulder pain only on the right side. On lowering her shoulders, the pain subsided immediately. Her range of movement was further assessed passively with the shoulder abducted to 90 degrees. On the right side she could externally rotate to 50 degrees and at this point it reproduced her shoulder pain. Internal rotation of the right side was 70 degrees and although this felt uncomfortable it did not reproduce any pain. On her left shoulder she could rotate both internally and externally to 90 degrees and neither movement reproduced any pain. On completing strength testing she had 5/5 strength on the Oxford Muscle Grading Scale in all directions but external rotation of the right shoulder reproduced her anterior shoulder pain. Assessment of her passive accessory glenohumeral joint movement found stiffness with her anterior to posterior glide on both sides and it was noted that her humeral head was sitting forwards in the glenoid fossa on the right side. Palpation of the surrounding muscle tissue revealed trigger points in the right pectoralis major and anterior deltoid muscles and tenderness over the long head of biceps tendon. Special tests such as the full can test was completed bilaterally and no pain was reported and her strength was even bilaterally. On completion of the empty can test she reported this reproduced her right sided shoulder pain but again her strength was good and even bilaterally. Finally, a biceps load test was completed on the right side and this was strong without pain provocation. Following this battery of tests, a provisional diagnosis of rotator cuff related shoulder pain was made and the client commenced physiotherapy treatment. Physiotherapy treatment consisted of advice and education, manual therapy, rehabilitation exercises and a home exercise programme to promote self-management.

Work-related quality of life intervention and evaluation

The client was supplied with a WRQoL scale on a single sided paper. There are 6 factors which are based on responses to 23 items. A 24th item 'I am satisfied with the overall quality of my working life' is usually included to provide an outcome variable for measuring the reliability and validity of the items. Respondents are required to answer the questions on a 5-point Likert scale (1=strongly disagree, 2=disagree, 3=neutral, 4=agree, and 5=strongly agree). In this way higher scores indicate more agreement. The scores of the three negatively phrased items are reversed (questions 7, 9, 19). After coding (including reversal of the three negatively phrased items), each factor score is determined by the sum of the items contributing to that factor. The overall WRQoL factor score is determined by the sum of all 23 WRQoL items, not including the 24th 'overall' item [7]. Table 1 depicts the responses to the work-related quality of life scale and Table 2 provides a summary of the work-related quality of life scores and classification.

Table 1: Work-related quality of life scale

	To what extent do you agree with the following?	SD	D	N	A	SA
1	I have a clear set of goals and aims to enable me to do my job				*	
2	I feel able to voice opinions and influence changes in my area of work					*
3	I have the opportunity to use my abilities at work					*
4	I feel well at the moment				*	
5	My employer provides adequate facilities and flexibility for me to fit work in around my family life				*	
6	My current working hours / patterns suit my personal circumstances				*	
7	I often feel under pressure at work					*
8	When I have done a good job it is acknowledged by my line manager			*		
9	Recently, I have been feeling unhappy and depressed		*			
10	I am satisfied with my life		*			
11	I am encouraged to develop new skills					*
12	I am involved in decisions that affect me in my own area of work					*
13	My employer provides me with what I need to do my job effectively					*
14	My line manager actively promotes flexible working hours / patterns	*				
15	In most ways my life is close to ideal		*			
16	I work in a safe environment			*		
17	Generally, things work out well for me				*	
18	I am satisfied with the career opportunities available for me here					*
19	I often feel excessive levels of stress at work				*	
20	I am satisfied with the training I receive in order to perform my present job					*

21	Recently, I have been feeling reasonably happy all things considered				*	
22	The working conditions are satisfactory				*	
23	I am involved in decisions that affect members of the public in my own area of work		*			
24	I am satisfied with the overall quality of my working life				*	

SD: strongly disagree, D: disagree, N: neutral, A: agree, SA: strongly agree

Table 2: Work-related quality of life scores and classification

	GWB	HWI	JCS	CAW	WCS	SAW	Total score
Work-related quality of life scores	20	9	27	12	12	7	87
Work-related quality of life classification	L	L	H	H	H	H	H

GWB: general well-being, HWI: home-work interface, JCS: job-career satisfaction, CAW: control at work, WCS: working conditions, SAW: stress at work; H: higher, A: average, L: lower

DISCUSSION

General Well-Being (GWB) reflects psychological wellbeing and general physical health. GWB both influences and is influenced by work. It warrants attention and action where necessary as it is closely linked with overall Quality of Working Life [8]. The client reported their GWB in the lower range. Home-Work Interface (HWI) is the degree to which an organisation understands and tries to help with the pressures outside of work. HWI is related to work-life balance and is about a measure of control over when, where and how you work. It is achieved when the individual feels they have a more fulfilled life outside paid work, to the mutual benefit of the individual and their work. A poor work-life balance can have negative effects on wellbeing [9]. The client reported their HWI in the lower range. Job and Career Satisfaction (JCS) reflects the extent to which the individual is content with their job and prospects at work. JCS relates to whether the individual feels the workplace provides them with the best things at work and the things that make them feel good, such as a sense of achievement, high self-esteem, fulfilment of potential, etc. JCS is influenced by clarity of goals and role ambiguity, appraisal, recognition and reward, personal development career benefits and enhancement and training needs [10]. The client reported their JCS in the higher range. Control at Work (CAW) reflects the level to which the individual can exercise what they consider to be an appropriate level of control within their work environment. That perception of control might be linked to various aspects of work, including the opportunity to contribute to the process of decision making that affects them [11]. Leading authors in the field suggest that perception of personal control can strongly affect both an individuals' experience of stress and their health [12-14]. The client reported their CAW in the higher range. Working conditions (WCS) assesses the extent to which an individual is satisfied with the conditions in which they work. The score for the WCS subscale indicates the extent to which the individual is satisfied with the fundamental resources, working conditions and security necessary to do their job effectively. This includes aspects of the work environment such as noise, temperature, shift patterns, working hours, pay, tools and equipment, safety and security [15]. The client reported their WCS in the higher range. Stress at work (SAW) assesses the extent to which an individual see work pressures and demands as acceptable and not excessive or 'stressful'. Work pressures and demands can be a positive aspect of work experience, providing challenge and stimulation, but, where they are excessive and beyond the ability of an individual to cope, it is likely to feel overloaded and stressed [16]. The client reported their SAW in the higher range. Overall, the client reported their WRQoL in the higher range.

Implications for practice

General Well-Being (GWB) and Home-Work Interface (HWI) were reported in the lower range. This indicates that, generally, the client was substantially less satisfied with their work life in these subscales compared to their work colleagues. With regards to GWB the client reported lower psychological wellbeing and general physical health and this can influence and/or be influenced by work. With regards to HWI the client reported that the extent to which the organisation understands her concerns and tries to help with the pressures outside of work was poor. A poor work-life balance can have a negative impact on the client's well-being. The action plan necessitates consideration for an onward referral to the counselling service and a discussion with the client on strategies of how to achieve a more fulfilled life outside paid work.

CONCLUSION

In conclusion, the evaluation of the WRQoL in a client presenting with a musculoskeletal disorder has been shown to be a valuable addition towards understanding the case. The strength of this case report is that it provides very detailed information in which to significantly capture the essence of the client's work experience in the broadest sense. The limitation of a single case report is that it is often viewed as lacking size to be generalisable to other cases. However, the details provided in this case report will hopefully enable clinicians to draw conclusions about the applicability of these findings to their own situation.

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