Adjustment to fibromyalgia: The role of domain-specific self-efficacy and acceptance

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Adjustment to fibromyalgia: The role of domain-specific self-efficacy and acceptance

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Abstract

Research in long-term conditions traditionally focuses on negative aspects of coping. The objective of this study was to investigate the role of positive factors such as self-efficacy and acceptance in the context of adjustment to fibromyalgia. The study employed a cross-sectional design using online questionnaires measuring self-efficacy, acceptance, kinesiophobia, coping, catastrophising, pain intensity and fibromyalgia impact. A total of 117 participants with fibromyalgia were recruited from fibromyalgia support-groups, organisations, and online forums. After controlling for other cognitive and demographic variables, pain self-efficacy remained a significant predictor of pain intensity ($p=.003$); symptom self-efficacy remained the best predictor of psychological fibromyalgia impact ($p=.001$); and function self-efficacy remained the best predictor of functional ($p<.001$) and total fibromyalgia impact ($p<.001$). However, the contribution of acceptance upon pain intensity and fibromyalgia impact was not significant. These results highlight the impact of different self-efficacy domains on pain intensity, and functional, psychological and total adjustment to fibromyalgia.

Key words: adjustment; acceptance; fibromyalgia; pain and pain management; self-efficacy

Introduction

Fibromyalgia

Fibromyalgia is a heterogeneous chronic disease of unknown aetiology characterised by widespread pain of the body, fatigue, joint stiffness and tenderness, affecting approximately 2-7% of the Western population (Branco et al., 2009; Gran, 2003, Mourao, Blyth & Branco, 2010). Between 20-80% of these patients also report co-occurring symptoms of mood disorders (Bennet et al., 2005; Fietta, Fietta & Manganelli, 2007). Given the uncertainty of the diagnosis, high comorbidity, and heterogeneity, fibromyalgia is arguably one of the most difficult pain conditions to adjust to (Bennett et al., 2005). These factors raise unique circumstances that may disrupt everyday life and challenge individuals' habitual management strategies. Here, 'adjustment' refers to the dynamic process of healthy rebalancing to new life circumstances, encompassing physical, functional, and psychological domains (Stanton et al., 2007). Many individuals with chronic pain continue to experience difficulties in adjusting to their condition (Kerns, Sellinger & Goodin, 2011; Williams, Eccleston & Morley, 2013).

Coping with fibromyalgia and pain

Research in fibromyalgia has traditionally focused on identifying factors that contributed to poor adjustment to chronic pain. The most important factors include catastrophising (cognitions of magnification and helplessness), kinesiophobia (fear of

movement/re-injury) and passive/avoidant coping strategies (Alda et al., 2011; De Gier, Peters & Vlaeyen, 2003; Giesecke et al., 2003; Karsdorp & Vlaeyen, 2009; Keefe, Rumble, Scipio, Giordano & Perri, 2004; Turk, Robinson & Burwinkle, 2004). These factors have been associated with increased pain, psychological distress, and physical disability (Keefe et al., 2004).

However, most of these approaches have highlighted specifically *negative* responses to coping. Positive psychologists have long recognised the inherent capacity of people to respond to adversity in ways that are life-enhancing and growth-facilitating (Seligman & Csikszentmihalyi, 2000). Within rehabilitation psychology, many authors have called for a re-appraisal of positive factors in assisting recovery from illness (e.g. Dunn & Dougherty, 2005). Within pain research specifically, the concept of resilience has emerged as an important determining factor for successful coping with long-term pain (e.g. Kerns et al., 2011; Stanton et al., 2007; Sturgeon & Zautra, 2010). Arguably, the investigation of factors that predicts *positive*, rather than negative, adjustment are more likely to bolster patients' coping and may prove to be more effective in guiding psychosocial interventions (Dunn & Dougherty, 2005). One of the most salient and consistent positive psychological factors in relation to adjustment to chronic pain include self-efficacy and acceptance (Buckelew et al., 1994; Jensen, Moore, Bockow, Ehde & Engel, 2011; Keefe et al., 2004; Kratz, Davis & Zautra, 2007; McCracken, Carson, Eccleston & Keefe, 2004a; McCracken & Vowles, 2006; Rodero et al., 2011; Van Liew, Brown, Cronan, Bigatti & Kothari, 2013).

Self-efficacy and chronic pain

Self-efficacy is the sense of competence and effectiveness in a specific domain

(Bandura, 2001). Efficacy beliefs are the foundation for human agency and self-efficacy affects progress (or lack thereof) and adaptation to challenging circumstances, including long-term illness (Bandura, 2001). Empirical research consistently suggests that self-efficacy is negatively correlated with pain intensity but positively associated with physical, functional and psychological adjustment to chronic pain. More specifically, self-efficacy predicts a larger variance of functioning, tension, and mood compared to kinesiophobia, coping, and catastrophizing, after pain intensity and re-injury have been statistically controlled for (Denison & Lindberg, 2004; Jensen, Turner & Romano, 1991; Lackner, Carosella & Feuerstein, 1996; Turner, Ersek & Kemp, 2005).

Self-efficacy also uniquely mediates the relationship between cognitive behavioural therapy and outcome (e.g. pain-related interference, disability), even after controlling for catastrophising, coping, and perceived control (Turner, Holtzman & Mancl, 2007). Among fibromyalgia patients, self-efficacy has been found to be the best predictor of observed pain behaviour, tender point index, disease severity, physical activity, and patient pain ratings (Buckelew et al., 1994), as well as long-term depression, physical functioning and pain intensity over time (Van Liew et al., 2013), even after controlling for myalgic scores, age, and psychological and physical functioning. Its importance as a positive psychological factor in successful coping with fibromyalgia is therefore clear.

Acceptance and chronic pain

In pain research, acceptance has become defined as a willingness to tolerate negative sensations and engage in valued activity despite the presence of negative sensations such as pain (McCracken & Vowles, 2006). Clients are encouraged to reduce

symptoms that cannot be controlled (i.e. pain), but instead direct efforts towards valued and achievable goals (Hayes, Strosahl & Wilson, 1999). In empirical studies, high acceptance predicts positive adjustment and provides a buffer against negative psychological factors such as catastrophizing (McCracken, 1998; McCracken & Eccleston, 2005; Rodero et al., 2011; Viane et al., 2003). In one study in particular, acceptance was the only predictor of functional status and functional impairment after it was entered together with catastrophising and coping in the analysis (Esteve, Ramirez-Maestre & Lopez-Martinez, 2007). Along with self-efficacy therefore, acceptance appears to be valuable construct in assessing positive coping with symptoms related to long-term illness.

Self-efficacy and acceptance in chronic pain

Given their importance to adjustment, it is surprising that there are few studies that have investigated self-efficacy and acceptance together. Thus far, only one study (Nicholas & Asghari, 2006) has investigated the effects of these predictors upon depression and functioning on a sample of chronic pain patients, most notably with back pain and widespread pain. Interestingly, the authors found that the Activity Engagement subscale of the Chronic Pain Acceptance Questionnaire (CPAQ) remained the best predictor of depression. Despite this, the results indicated that self-efficacy was a better predictor of functioning (Nicholas & Asghari, 2006). It is worth noting however that the Nicholas and Asghari (2006) only included self-efficacy for performing specific tasks (functional self-efficacy) and did not analysis the CPAQ subscales together. Thus, the interaction between acceptance and self-efficacy remain unclear.

Purpose of study

Self-efficacy is domain-specific and may therefore relate to different adjustment outcomes. In relation to chronic pain, three domains have been identified: pain self-efficacy (SEP) for managing pain; function self-efficacy (SEF) for managing activities; and symptom self-efficacy (SES) for managing related symptoms, such as depression (Turner et al., 2005). Although few studies that have investigated domain-specific self-efficacy, each self-efficacy domain is related to a different aspect of adjustment (e.g. Lorig, Chastain, Ung, Shoor & Holman, 1989).

The objective of this study was to therefore investigate the impact and role of SEP, SEF, SES and acceptance, in the context of kinesiophobia, catastrophising, and coping, in accounting for pain intensity and adjustment (functional, psychological, and total) to fibromyalgia. It was predicted that self-efficacy domains and acceptance would remain a significant predictor of pain intensity, functional, psychological and total adjustment after controlling for kinesiophobia, catastrophising and coping.

Methods

Participants

Overall, 148 participants diagnosed with fibromyalgia consented to take part in the study. Diagnosis was established through participant self-report. Eligibility included: 1) diagnosis of fibromyalgia; 2) 18 years or older; 3) proficiency in English; and 4) absence of severe psychiatric difficulties that would prevent participation such as active psychosis or dementia. The majority of participants were female, married, aged 45-54 and had a bachelor's degree or higher. The majority were also in full-time/part-time employment, and used at least one class of medication to control their pain.

(Table 1)

Descriptive data on impact and cognitive characteristics among 117 participants are presented in Table 2. The demographic, impact and cognitive characteristics of the sample were largely within the range reported in the literature (e.g. Bennet et al., 2009; Denison et al., 2004; Feifel et al., 1987; Lorig et al., 1989; McCracken & Keogh, 2009; Melzack, 1987; Nicholas & Asghari, 2006; Palomino et al., 2007; Sullivan et al., 1995; Van Liew et al., 2013; Vowles et al., 2008).

(Table 2)

Procedure

This study used a cross-sectional design. Data were collected using online questionnaires examining levels of domain-specific self-efficacy, acceptance, coping, kinesiophobia, catastrophising, and pain intensity, psychological well-being, functioning and total fibromyalgia impact. Participants were recruited from fibromyalgia support groups, organisations and forums across the United Kingdom and the United States. Gatekeepers were contacted via email to ask for permission to advertise and upload the study on their webpage or forums. After permission was obtained, a hyperlink of the study with a promotional text was uploaded on the website of fibromyalgia support-groups, organisations and forums. The hyperlink directed participants to the study survey, which included study information, consent form, the questionnaires and a debrief sheet. Participants confirmed that they

understood the nature of the study and consented to take part by pressing the next button before proceeding to the questionnaires.

The XXX [removed for anonymity] research ethics committee approved the study.

Measures

Demographic Measures

Demographic information included age, gender, marital status, ethnicity, number of different classes of medication used to control pain, education level, and employment status.

Arthritis Self-Efficacy Scale (ASES)

The ASES is a 20-item scale measuring self-efficacy for pain, functioning, and symptoms, and has been used with fibromyalgia patients (Lorig et al., 1989, Van Liew et al., 2013). The ASES has high internal ($.75 \leq \alpha \leq .89$) reliability, and satisfactory construct and concurrent validity (Barlow et al., 1997; Lorig et al., 1989).

Chronic Pain Acceptance Questionnaire (CPAQ)

CPAQ is a 20-item inventory designed to measure acceptance of pain, and includes two subscales: activity engagement and pain willingness (McCracken, Vowles & Eccleston, 2004b). The CPAQ has high internal consistency (α=0.78-0.82; McCracken et al., 2004) and significantly correlates with functioning, depression, anxiety and psychosocial disability (McCracken & Eccleston, 2003). In this study, the total score was used.

Revised Fibromyalgia Impact Questionnaire (R-FIQ)

The R-FIQ is a 21-item questionnaire that includes three subscales that measure fibromyalgia functional impact (R-FIQ function), psychological impact (R-FIQ symptom) and overall impact (R-FIQ total; Bennett et al., 2009). The R-FIQ provides high internal consistency (α=0.95), a good construct, discriminant and concurrent validity (Bennet et al., 2009; Srifi et al., 2013).

The Present Pain Intensity (PPI)

The PPI (Melzack, 1987) is a tool to assess the pain intensity on a scale of 0 (no pain) to 5 (excruciating). The PPI, which is a part of short-form McGill Pain Questionnaire, has been widely used in chronic pain research (Dworkin et al., 2009).

Tampa Scale for Kinesiophobia (TSK)

The TSK is 17-item scale developed to measure kinesiophobia/fear of movement and activity (Miller, Kori & Todd, 1991). A review, which included fibromyalgia patients, estimated the internal reliability as high (Lundberg et al., 2011).

Pain Catastrophising Scale (PCS)

The PCS is 13-item scale developed to measure catastrophising related to chronic pain (Sullivan, Bishop & Pivik, 1995). The PCS has been validated on a sample of chronic back pain patients. Internal consistency was estimated as moderate to high (Sullivan et al., 1995).

Medical Coping Modes Questionnaire (MCMQ)

The MCMQ is a 19-item scale developed to identify coping strategies (confrontation, avoidance, and resignation) in dealing with illness (Feifel, Strack & Nagy, 1987). The construct validity and internal reliability has been reported as moderate to high (Rodrigue, Jackson & Perri, 2000).

Analysis

There were missing data from 31 participants who were removed from the analysis resulting in a final sample of 117 participants. List-wise deletion was used since there were many missing values, which can distort the results (Field, 2009). Data were analysed using IBM SPSS 19.

Data were tested for assumptions of multiple linear regression (Osborne & Waters, 2002). The Durbin-Watson statistics were between 1-3 in all analyses (range; 1.84-2.30), indicating that the assumption of independence of errors is tenable. Most VIF values for all predictors were close to 1, and all Tolerance values were greater than 0.3; therefore there were no co-linearity in this data. For multicolinearity, a series of correlation analyses between the predictors did not indicate correlation coefficient above r=.8 (see table 3).

To test for the predictive value of each predictor variable, a series of Pearson's forced entry multiple linear regressions were carried out. The method of analysis for the final data set was hierarchical multiple linear regressions. The criterion variables included pain intensity (PPI), fibromyalgia functional impact (R-FIQ function), fibromyalgia psychological/symptom (R-FIQ symptom) impact and total fibromyalgia impact (R-FIQ total).

A post hoc power analysis was conducted using G*Power 3.1, linear multiple regression, fixed model R^2 deviation from zero (Faul, Erdfelder, Buchner & Lang,

2009). Statistical power was calculated using a sample size of 117 with nine predictor variables, an effect size of f^2=1.14 (calculated using the formula $f^2=R^2/1- R^2$), and alpha level 0.05. This showed a post hoc power level of 1.0.

Results

The nature and impact of the predictors (self-efficacy, acceptance, catastrophising, kinesiophobia and coping strategies) upon the criterion variables (pain intensity, functional, psychological and total fibromyalgia impact) were explored in a series of hierarchical multiple regression analyses. Self-efficacy scales were entered in the last block, after acceptance, cognitive and demographic variables.

Pain Intensity

In this analysis, pain intensity was predicted by SEP (block 3), controlling for acceptance, SEF, kinesiophobia, catastrophising, confrontational coping, resignation coping (block 2), employment status and number of medication classes used to control pain (block 1). Table 3 shows the result for this analysis. The final model was significant ($F(9,107)=13.57$, $p<.001$), accounting for approximately 49% of the variance of pain intensity ($R^2=.53$, adjusted $R^2=.49$). Controlling for the other variables, SEP significantly predicted 4.1% of unique variance ($\beta=.279$, $p=.003$). However, the largest contribution was provided by confrontational and resignation coping ($\beta=.282$, $p<.0001$; $\beta=.282$, $p=.004$), although employment status and number of medication classes used also made a significant contribution to the variance ($\beta=-.202$, $p=.008$; $\beta=.162$, $p=.023$). The contribution of acceptance was completely

eliminated.

(Table 3)

Fibromyalgia Functional Impact

In this analysis, fibromyalgia functional impact (R-FIQ function) was predicted by SEF (block 3), acceptance, pain intensity, catastrophising, kinesiophobia, all coping strategies (block 2), employment status and number of medication classes used to control pain (block 1). The results are presented in Table 4. The final model was significant ($F(10, 106)=16.19$, $P<.001$), accounting for approximately 60% of the variance of fibromyalgia functional impact ($R^2=.60$, adjusted $R^2=.56$). Controlling for the other variables, SEF remained the strongest predictor, accounting for 15.5% of unique variance of the final model ($\beta=.-496$, $p<.001$). Additionally, pain intensity ($\beta=.236$, $p=.008$) and avoidance coping ($\beta=.166$, $p=.011$) also remained significant predictors in the final model. The contribution of acceptance remained non-significant.

(Table 4)

Fibromyalgia Psychological Impact

In this analysis, fibromyalgia psychological impact (R-FIQ Symptom) was predicted by SES (block 3), acceptance, SEF, pain intensity, catastrophising, kinesiophobia, all coping strategies (block 2), employment status and number of medication classes used (block 1). The results are presented in Table 5. The final model was significant (F(10,

106)=19.90), p<.001), accounting for approximately 62% of the variance of fibromyalgia psychological impact (R^2=.65, adjusted R^2=.62). Controlling for the other variables, SES remained the strongest predictor, accounting for 4% of unique variance (β=-.334, P=.001). Additionally, pain intensity (β=.301, p<.001), SEF (β=.262, p=.001), and catastrophising (β=.209, p=.048) also remained significant predictors in the final model. The contribution of acceptance was completely eliminated.

(Table 5)

Total Fibromyalgia Impact

In the first analysis, total fibromyalgia impact (R-FIQ total) was predicted by SEF (block 3), acceptance, SES, pain intensity, catastrophising, kinesiophobia, all coping strategies (block 2), employment, and number of medication classes used (block 1). The results are presented in Table 6. The final model was significant (F(11,105)=25, p<.001), accounting for approximately 69% of the variance of total fibromyalgia impact (R^2=.72, adjusted R^2=.69). Controlling for the other variables, SEF remained the strongest predictor, accounting for 5.7% of unique variance (β=-.320, p<.001). Additionally, pain intensity (β=.303, p<.001) and SES (β=-.274, p=.002) also remained significant predictors in the final model. The contribution of acceptance was completely eliminated.

(Table 6)

Discussion

The study examined the role of positive factors in adjustment to fibromyalgia, specially the relationship of self-efficacy and acceptance in predicting pain intensity, functional, psychological and total adjustment to fibromyalgia when controlling for the effects of catastrophising, kinesiophobia and coping. The results showed that after controlling for other cognitive variables and demographic variables, only self-efficacy scales remained the strongest predictors of functional, psychological and total adjustment to fibromyalgia and a significant predictor of pain intensity, whereas the contribution of acceptance upon all criterion variables was virtually eliminated. It was also noted that coping strategies (confrontational and resignation) were the strongest predictors of pain intensity (albeit positively), although SEP was still a strong predictor.

Based on previous research, it is perhaps not surprising that self-efficacy was shown to be an important factor in understanding adjustment to fibromyalgia (e.g. Van Liew et al., 2012; Turner et al., 2007). However, this study further highlighted the impact of different self-efficacy domains (i.e. pain, functional, symptom) on adjustment variables (Turner et al., 2005), and thus, emphasises the importance of considering domain-specific self-efficacy in order to fully understand various aspects of fibromyalgia adjustment. Specifically, the results revealed that SEP was a strong predictor of pain intensity, SES was the strongest predictor of psychological adjustment (R-FIQ Symptoms) and SEF was the strongest predictor of functional (R-FIQ Function) and total adjustment (R-FIQ Total). Therefore, the results suggest that individuals who felt better able to manage their pain, functioning or symptoms were also less likely to report higher pain intensity, functional impairment, or fibromyalgia-related psychological symptoms.

The results did not support the hypothesis that acceptance would significantly predict outcome variance in pain intensity and adjustment to fibromyalgia after controlling for other cognitive variables. In some ways, this finding is partly consistent with the results of Nicholas and Asghari (2006) but are inconsistent with other studies that found acceptance as a whole predicting positive adjustment to chronic pain (McCracken & Vowles, 2006).

Three possible explanations are postulated to explain these differences. Firstly, following Nicholas and Asghari (2006), there may be limitations in how acceptance is measured (i.e. via the CPAQ). However, further in-depth scrutiny would be required to support this hypothesis as considerable analysis have supported the validity of the CPAQ (e.g. McCracken et al., 2004; Bendayan, Esteve & Blanco, 2012; Fish, Hogan, Morrison, Stewart & McGuire, 2013). Secondly, the cross-sectional design restricts reliable and unambiguous causative inferences. Thirdly, the results may reflect the addition of domain-specific self-efficacy, suggesting that changes in pain, functional, or symptom self-efficacy is more important in explaining adjustment than changes in acceptance, consistent with the results of Nicholas and Asghari (2006). However, further research is needed to establish these explanations.

Implications of findings

Rehabilitation programmes for pain do not always focus on the most salient empirical factors in predicting positive adjustment to pain (Valente, Ribeiro & Jensen, 2009). Identifying sources of positive coping, such as self-efficacy, may enable more successful adjustment among people with chronic pain, including the enhancement of positive function and well-being (Sturgeon & Zautra, 2010). Indeed, self-efficacy-based interventions seem to promote a motivational context that makes it easier for

people to adjust (Ryan, Lynch, Vansteenkiste & Deci, 2011).

Self-efficacy is therefore an appealing concept in the context of pain treatment, since it redirects attention to the client's strengths in adversity, rather than focus on insurmountable difficulties (Keefe et al., 2004; Valente et al., 2009). Moreover, treatments targeting self-efficacy may benefit more from protocols specifically intended to enhance and maintain *domain-specific* self-efficacy (i.e. pain vs. functional vs. symptom) in clients. Such interventions, however, need to first identify specific outcome domains (e.g. pain, psychological vs. functional vs. total adjustment) based on the patient's main priorities and goals (Keefe et al., 2004).

Further research could address the unexplained variance in the current regression models. Previous research suggests variables such as fatigue, dolorimetry, tender points and social support predict variance in pain intensity and adjustment (Franks, Cronan & Oliver, 2004; Wolfe, 1997; Wolfe, Ross, Anderson, Russel & Herbert, 1995). Future research could build on the current cross-sectional study using experimental, treatment or longitudinal designs (Hayes et al., 1999). Such designs may further elaborate the validity, reliability and the long-term effects of these constructs, and pilot positive psychological interventions for chronic pain.

Study limitations

Several limitations of the study deserve discussion. Firstly, this was a cross-sectional study and so unable to identify causal factors. Additionally, closed questionnaires are unable to capture the wider context and time frame of a particular condition. Also, the current study was conducted online and was based on a sample whose members were part of support groups, organisations and forums. Therefore, the results may not be generalizable to non-internet users. Along with this, fibromyalgia diagnosis was

established by participant self-report meaning their exact clinical status was uncertain. Finally, the study sample was modest given the number of predictor variables included, which could have resulted in some effects remaining undetected. Despite these limitations however, this study was also built upon empirically derived data, using validated questionnaires, and so therefore provides a useful basis for further exploration of these important concepts.

Conclusion

In conclusion, the present study suggested that domain-specific self-efficacy was strongly predictive of pain intensity, functional, psychological and total adjustment to fibromyalgia, whereas acceptance did not predict pain intensity or adjustment to fibromyalgia once other cognitive variables were accounted for. Therefore, the importance of addressing and developing domain-specific self-efficacy for specific adjustment outcomes has been highlighted, and may offer some utility in guiding pain treatment programmes based on the principles of positive psychology.

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Table 1. Demographic characteristics

Variable	Frequency	Percent (%)
Gender (female)	99	84.6
Ethnicity (white British)	112	95.7
Age (years)		
18-24	3	2.6
25-34	13	11.1
35-44	28	23.9
45-54	43	36.8
55-	0	0
Relationship status		
Single	25	21.4
Married	74	63.2
Partnership but not married	11	9.4
Other	7	6.0
Education		
Primary	24	20.5
A-levels	23	19.7
Bachelors or higher	50	42.8
Other	20	17.1
Employment (employed)	67	57.3
Prescribed medication usage		
No medication	19	16.2
1 class	31	26.5
2-4 classes	57	48.7
5 or more classes	7	6.0
Unclear	3	2.6

Table 2. Impact and cognitive characteristics

Variable	Mean (SD)	Range
Impact characteristics		
Pain Intensity (SF-MPQ)	3.13 (1.08)	0-5
Functional Impact (R-FIQ Function)	17.79 (7.59)	0-30
Psychological Impact (R-FIQ Symptom)	31.83 (9.05)	2-49.5
Total Impact (R-FIQ Total)	61.70 (19.82)	2-99.5
Cognitive characteristics		
Pain Self-Efficacy (ASES Pain)	4.93 (2.43)	1.25-12.5
Function Self-Efficacy (ASES Function)	5.28 (2.53)	1-10
Symptom Self-Efficacy (ASES Symptom)	3.99 (2.10)	1-10
Acceptance (CPAQ total)	57.05 (19.29)	12-106
Catastrophising (PCS total)	19.70 (13.51)	0-52
Kinesiophobia (TSK)	34.34 (8.23)	17-58
Confrontation coping (MCMQ)	20.39 (4.36)	11-31
Acceptance/resignation coping (MCMQ)	9.00 (2.72)	4-16
Avoidance (MCMQ)	17.03 (3.56)	8-27

Abbreviations: See ‘Measures’ section.

Table 3. Multiple linear regression analysis predicting Pain Intensity

Blocks and Predictors	**R^2**	**Adjusted R^2**	**R^2 Change**	**β[a]**	**P Value**
Criterion variable: Pain Intensity	.53	.49			<.001
Block 1					
Employment	.149	.134		-.202	.008
No. of Med.				.162	.023
Block 2					
Acceptance	.492	.455	.344	.043	.683
Func. Self-Efficacy				-.067	.442
Kinesiophobia				-.102	.244
Catastrophising				.175	.138
Confrontational				.282	<.001
Resignation				.282	.004
Block 3					
Pain Self-Efficacy	.533	.494	.041	-.279	.003

[a=]Standardised Regression Coefficient

Table 4. Multiple linear regression analysis predicting FM Functional Impact

Blocks and Predictors	**R^2**	**Adjusted R^2**	**R^2 Change**	**β[a]**	**P Value**
Criterion variable: Functional FM Impact	.60	.56			<.001
Block 1					
Employment	.131	.116		-.040	-580
No. of Med.				.084	.201
Block 2					
Acceptance	.450	.404	.319	-.132	.169
Kinesiophobia				-.039	.634
Catastrophising				-.041	.711
Confrontational				.028	.682
Resignation				.027	.771
Avoidance				.166	.011
Pain Intensity				.236	.008
Block 3					
Func. Self-Efficacy	.604	.567	.155	-.496	<.001

Abbreviations: FM, fibromyalgia
[a=]Standardised Regression Coefficient

Table 5. Multiple linear regression analysis predicting FM Psychological Impact

Blocks and Predictors	**R^2**	**Adjusted R^2**	**R^2 Change**	**β[a]**	**P Value**
Criterion variable: Psych. FM Impact	.65	.62			<.001
Block 1					
Employment	.135	.120		-.104	.123
No. of Med.				.020	.749
Block 2					
Acceptance	.612	.579	.477	-.029	.320
Func. Self-Efficacy				-.262	.001
Kinesiophobia				-.090	.237
Catastrophising				.209	.048
Confrontational				.051	.430
Resignation				-.111	.217
Pain Intensity				.301	<.001
Block 3					
Symp. Self-Efficacy	.653	.620	.040	-.334	.001

Abbreviations: FM, fibromyalgia
[a=]Standardised Regression Coefficient

Table 6. Multiple linear regression analysis predicting Total FM Impact

Blocks and Predictors	**R^2**	**Adjusted R^2**	**R^2 Change**	**β[a]**	**P Value**
Criterion variable:					
Total FM Impact	.72	.69			<.001
Block 1					
Employment				-.050	.409
No. of Med.	.142	.127		.040	.468
Block 2					
Acceptance	.667	.635	.525	.095	.100
Symp. Self-Efficacy				-.274	.002
Kinesiophobia				-.066	.337
Catastrophising				.022	.817
Confrontational				.045	.437
Resignation				-.032	.690
Avoidance				.095	.083
Pain Intensity				.303	<.001
Block 3					
Func. Self-Efficacy	.724	.695	.057	-.320	<.001

Abbreviations: FM, fibromyalgia
[a=]Standardised Regression Coefficient.