

# Patient outcomes for fibromyalgia treatments



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Busch et al. (2011) describes fibromyalgia as chronic condition that exhibits symptoms that include widespread pain, non-recuperative sleep and fatigue. Fibromyalgia can affect anyone of any age but is most prevalent in women aged 50 or older (Traska, Rutledge, Mouttapa, Weiss, & Aquino, 2010). Currently, the etiology of fibromyalgia is not understood. Fibromyalgia also has no specific diagnostic tests or cures (Becker, Stuifbergen, Taxis, Beal, & Pierini, 2009). Diagnosis is established with guidelines set by the American College of Rheumatology (Gore, Sadosky, Zlateva, & Clauw, 2009). Gore, et al. (2009) states that the guidelines stress the incidence of pain and tenderness at least 11 of the 18 defined “ tender points.” Treatment for fibromyalgia, according to Zhao, Sun, Watson, Mitchell, and Swindle (2011), is palliative measures that include pharmacological treatment, behavioral modifications, physical and exercise therapy, and alternative medicines. This literature review is an examination of both pharmacologic and non-pharmacologic treatments for fibromyalgia and the effectiveness of the treatments. The following text will review and analyze several pieces of literature that provide information and statistics regarding the different methods of controlling the symptoms of fibromyalgia. The conclusion of this review will present suggestions and recommendations for enhancing and expanding the current body of research.

## Literature Review

### Pharmacologic Treatment

Pharmacologic treatment for fibromyalgia includes many classes of medications. Medications include analgesics, antidepressants,

anticonvulsants, opioids, and dopamine agonists (Zhao, Sun, Watson, Mitchell, & Swindle, 2011). The pathophysiology of fibromyalgia is not well understood, but is believed to be the result of an increase in pain signal transmission of the central nervous system (Gore, et al. 2009). Gore, et al. (2009) focused attention on the medications gabapentin and pregabalin. A commercial database was used to study identifying traits among patients newly prescribed gabapentin and pregabalin that included clinical characteristics, healthcare resource use, and pharmacologic therapy (Gore, et al. 2009). Statistics were limited to those with at least one healthcare encounter during 2006 and 2007 with a diagnosis of fibromyalgia and naive to both gabapentin and pregabalin. The sample was majority female (85%) and greater than 70% over the age of 45 (Gore, et al. 2009).

Results indicated that pregabalin users in the cohort study saw statistically significant reduction ( $p$  values  $<0.05$ ) in nonsteroidal anti-inflammatory drugs (NSAIDs) and anticonvulsants in the postindex period (Gore, et al. 2009). The gabapentin cohort yielded results indicated an increase ( $p$  values  $<0.05$ ) in the use of opioids, serotonin-norepinephrine reuptake inhibitors, anticonvulsants, benzodiazepines, and topical agents (Gore, et al. 2009). The use of pregabalin is seemingly superior to the use of gabapentin, however, other statistics measured in the study indicate that both drugs are associated with increased costs (Gore, et al. 2009).

A systematic literature review of 14 studies revealed a decrease in healthcare access among Latinos in the US as compared to Caucasian Americans (Timmins, 2002). Fifty-five percent of these studies indicated significant negative effects to healthcare access for Latino individuals with

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LEP (Timmins, 2002). Cancer screenings, mental health evaluations, and reproductive care among Latino populations were substantially lower (Timmins, 2002). The reason for this decline was primarily linked to poor health education and promotion as a result of linguistic barriers (Timmins, 2002). Communication barriers also hindered therapeutic rapport that potentially contributed to decreased access to care (Timmins, 2002).

Shi, Lebrun, and Tsai (2009) conducted descriptive and comparative research on a national health survey that involved 29, 868 participants. The purpose of this research was to determine the influence of LEP on healthcare access (Shi et al., 2009). Analysis showed that respondents with LEP were more inclined to waive needed medical care and less inclined to have healthcare visits (Shi et al., 2009). In particular, unadjusted analysis showed 58% of respondents with LEP and adjusted analysis revealed 34% of those respondents were more likely to have reduced healthcare visits (Shi et al., 2009). This study revealed multivariable impacts upon healthcare access; however, strategic analysis allowed for variable isolation in order to fully assess the effect of language barriers alone upon healthcare access.

In a descriptive study, DuBard and Gizlice (2008) examined responses from 45, 076 Hispanics in a randomized national health survey. The study indicated that healthcare access was substantially limited for Hispanics with LEP than Hispanics with English proficiency. The results showed 55% of Hispanics with LEP had no health insurance; whereas, 23% of Hispanics who spoke English were uninsured (DuBard & Gizlice, 2008). An additional comparison revealed that 58% of Hispanics with LEP had not obtained a primary doctor, while 29% of English-speaking Hispanics were under primary

physician care (DuBard & Gizlice, 2008). Hispanics with LEP were also less likely to have annual health visits and preventative services, such as immunization, dental, and screening care (DuBard & Gizlice, 2008). These results have implied a prominent influence of language barriers upon access to healthcare. Multivariate analysis disclosed limitations to healthcare access for all Hispanics, but a substantial decrease in access to health services was observed for Hispanics with LEP (DuBard & Gizlice, 2008).

### Safety and Quality of Care

In his systematic review, Timmins (2002) reported that 86% of studies indicated a definite negative effect of linguistic barriers upon the quality of care for Hispanics with LEP. In comparison to Hispanics that were proficient in English, one study revealed Hispanics with LEP were significantly ( $P < 0.001$ ) less informed of potential side effects of medication therapy regime; as a result, medication compliance decreased and safety was compromised (Timmins, 2002). Moreover, a statistically significant ( $P < 0.05$ ) proportion of Hispanics with LEP reported dissatisfaction with medical treatment; direct correlation was made between dissatisfaction and language barriers (Timmins, 2002). Additionally, studies indicated unfavorable effects of language discordance between physicians and patients. Hispanics with LEP were more inclined to abstain from asking questions and were less likely to satisfactorily recall information from physician/patient interactions (Timmins, 2002).

Masland, Kang, and Ma (2011) conducted a study that assessed medication prescription comprehension in the following five ethnic minority groups: (a)

Mexican, (b) Central American, (c) Chinese, (d) Korean, and (e) Vietnamese. Limited English proficiency inhibited communication and understanding of prescriptions in all ethnicities except Vietnamese (Masland et al., 2011). In particular, limited English proficiency in the Mexican, Central American, and Korean groups tripled the chance of misinterpretation and quadrupled the chance for the Chinese group (Masland et al., 2011). Poor communication and unavailability of prescription labels in native languages were associative reasons that inhibited prescription understanding and ultimately compromised client safety (Masland et al., 2011). However, most all ethnicities greatly benefitted from having language concordant physicians (Masland et al., 2011).

As a result of physician/patient communication barriers, patients with LEP had an increased probability of undergoing more diagnostic testing (Pares-Avila et al., 2011). Studies reported physicians unnecessarily ordering an array of tests to determine or rule out health problems (Pares-Avila et al., 2011). This action not only potentially contributed to poor patient satisfaction but also promoted delays in care services (Pares-Avila et al., 2011).

### Health Status and Management

According to DuBard and Gizlice (2008), 39% of Hispanics with LEP reported fair or poor health status; whereas, 17% of Hispanics who were English proficient conveyed fair or poor health condition. Timmins (2002) added that negative health status and outcomes could be attributed to language barriers. Misdiagnosing and prescription errors were found in one study to

have contributed to negative health outcomes, yet limited English proficiency was not clearly isolated as a specific cause (Timmins 2002). Another study alluded to a casual association between language barriers and negative health outcomes, which potentially promoted declines in health status (Timmins, 2002).

Wisnivesky et al. (2009) conducted a cohort study to analyze asthma control and quality of life. Upon comparing English proficiency levels, Wisnivesky et al. (2009) discovered major language barrier impacts. Latinos with LEP had statistically significant ( $P < 0.05$ ) poorer asthma control and reduced quality of life (Wisnivesky et al., 2009). Latinos with LEP were 2.4 times more inclined to experience asthma exacerbations that necessitated outpatient care and were 4.4 times more prone to undergo treatment in an emergency room or hospitalized care (Wisnivesky et al., 2009). Latinos with LEP exhibited decreased understanding related to disease care and management with lower adherence to treatment regimens (Wisnivesky et al., 2009). Consequently, these results indicated a greater risk for poor health outcomes for individuals with limited English proficiency.

Fernandez et al. (2010) examined data from the 2005-2006 Diabetes Study of Northern California, a well-designed cohort of insured clients, to determine diabetes management of Hispanic individuals with LEP. Although this study's multivariate analysis examined other variables that could have contributed to ineffective glycemic control, limited English proficiency was identified as the primary "independent predictor" (Fernandez et al., 2010, p. 170) of poor glycemic management among US Hispanics. Analysis further revealed statistically significant improvement ( $P < 0.01$ ) toward effective diabetes

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management as a result of physician language concordance (Fernandez et al., 2010).

### Future Research and Practice Recommendations

Literature has confirmed the existence of multivariable elements that compound, exacerbate, and/or lead to healthcare disparities among minority populations. Ongoing research is needed to explore all potential variables, to analyze the impact each variable has upon healthcare, and to discover best methods to improve healthcare for minority groups. A substantial amount of literature has corroborated language barriers as a major source contributing to negative healthcare management; therefore, this appraiser has considered this evidence indicative of poor professional practice that insufficiently bridges language barrier divisions and compromises patient healthcare. Nurses should be proactive in employing interpreter services and finding best practice measures to effectively communicate with patients. Pares-Avila et al. (2011) reported that patients with LEP are often not informed of their legal rights to have interpreters; hence, nurses must be client advocates and inform patients of this entitlement. Furthermore, quality improvement measures and future research should be implemented to continually evaluate interpreter service use and effectiveness.

In the US, rapid expansion in language diversity has not mirrored the available diversity among healthcare workers (Pares-Avila et al., 2011). Literature has reflected improvements in healthcare directly related to having language concordant physicians, yet accessibility of language concordant providers has not adequately complemented the increasing



number of patients with linguistic diversities. This literature review lacked studies that addressed or assessed the impact of nurse language concordance. However, this appraiser values language agreement between nurse and patient, perceiving it a powerful measure to ensure affective communication and promote health. More research is needed to analyze the effect of language unity between nurses and clients. With a growing diverse nation and competitive work arena, nurses should envision secondary language acquisition as the “ edge” toward professional success and patient satisfaction.

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