



2017

## Chronic Pain: Understanding Its Effects on the Spouse

Follow this and additional works at: <https://scholarsarchive.byu.edu/intuition>



Part of the [Psychology Commons](#)

### Recommended Citation

(2017) "Chronic Pain: Understanding Its Effects on the Spouse," *Intuition: The BYU Undergraduate Journal in Psychology*: Vol. 12 : Iss. 2 , Article 5.

Available at: <https://scholarsarchive.byu.edu/intuition/vol12/iss2/5>

This Article is brought to you for free and open access by the All Journals at BYU ScholarsArchive. It has been accepted for inclusion in *Intuition: The BYU Undergraduate Journal in Psychology* by an authorized editor of BYU ScholarsArchive. For more information, please contact [scholarsarchive@byu.edu](mailto:scholarsarchive@byu.edu), [ellen\\_amatangelo@byu.edu](mailto:ellen_amatangelo@byu.edu).

# Chronic Pain: Understanding Its Effects on the Spouse

**Summer B. Frandsen**

*Brigham Young University*

---

## Abstract

This literature review focuses on how the partner of an individual with chronic pain is affected by that pain. Results from the studies examined have been divided into four different categories of potential effects: household, physical, mental/emotional, and marital. The household consequences include items such as finances and role reversals for household tasks (West, Usher et al., 2012). The physical consequences consist of symptoms such as varying pains and lack of sleep (Martire et al., 2013; Turk et al., 1987). The primary mental/emotional consequence of having a spouse with chronic pain is distress, which can lead to issues such as depression (Ahern et al., 1985; Schwartz et al., 1991). Marital effects include decreased sexual relations and decreased marital satisfaction (Strunin & Boden, 2004). Despite many possible negative effects, the literature indicates that while some spouses struggle with the onset of chronic pain in their partner, many succeed or even thrive (West, Buettner et al., 2012). Spouses may be able to better cope or thrive despite their partner's chronic pain when they receive support from their partner and from outside sources like psychologists (Subramanian, 1991). Additionally, it is important that spouses are included in creating a plan on how to handle the pain and how to handle the life changes it will bring (Leonard & Cano, 2006). Further research is needed to gain greater insight into what helps patients' spouses to overcome the challenge of chronic pain in order to help these spouses live satisfying lives despite their partners' chronic pain.

*Keywords:* chronic pain; spouse; partner; effects; literature review; thrive

---

## **Chronic Pain: Understanding its Effects on the Spouse**

Chronic illness is a condition frequently heard of and experienced in the world today. Some common examples include cancer, heart diseases, diabetes, and multiple sclerosis—many of which are life-changing and debilitating. People are very aware of some of these maladies, perhaps because of their outward physical markers, their mortality rates, or the level of media awareness surrounding them. For example, cancer's prominence in public discussion is demonstrated by recent blockbusters such as "The Fault in Our Stars," "My Sister's Keeper," and "A Little Bit of Heaven," all of which have focused on the trauma and heartbreak of cancer. The addition of cancer awareness programs has made the disease well-known and widely discussed. However, there are some chronic conditions that remain poorly understood, even though they are prevalent and affect much of the world's population.

One such ailment is chronic pain. Although people with chronic pain may look healthy on the outside and the threat of death may not be imminent, they are constantly, or at least frequently, in pain (American Chronic Pain Association, 2017). The intensity and range of the pain can vary. It could be widespread pain, such as that found in Fibromyalgia or rheumatoid arthritis patients, or more concentrated pain caused by a phantom limb, back pain, or pelvic pain. (American Chronic Pain Association; Korff, Ormel, Keefe, & Dworkin, 1992).

Research has shown that the constant presence of such pain affects multiple facets of patients' lives (Flor, Turk, & Scholz, 1987; Subramanian, 1991). Some common results include difficulty sleeping; inability to exercise, perform household chores, participate in recreational activities, or to be employed (which can lead to financial difficulties); depression; and loss of social interaction, including that of close friends and family (Breivik, Collett, Ventafridda, Cohen, & Gallacher, 2006). Although this list is extensive, it only partially covers the extent to which pain alters the world of a person who suffers with it on a chronic basis.

Although many previous studies have focused on the impact of pain on the individual, researchers have now begun to recognize that the struggles of individuals with chronic pain affect members of the family. Multiple studies have focused on understanding the effect that a familial relationship can have on the patient, including how family

interactions positively or negatively impact the patient and their struggle with daily pain (Leonard, Cano, & Johansen, 2006).

It is apparent from studies that the family plays an integral role in how a patient handles their disability. Conversely, it seems logical that the patient's state would also have a substantial influence on the life of their family. This influence would seem especially potent considering how life altering the onset of chronic pain can be. As researchers have studied the impact chronic pain has on the family unit, it has been shown that a chronic pain patient's family is deeply affected by the onset of pain in a family member (Kemler & Furnee, 2002).

While having a family member with chronic pain often affects the entire family, this review will specifically cover the literature concerning the wide range of effects that chronic pain can have on the spouse of a person who suffers from chronic pain. The effects discussed can be separated into four categories: household, physical, mental-emotional, and marital. Although many of the studies have found primarily detrimental outcomes of chronic pain on spouses, there has also been quite a bit of insight and research showing that some couples thrive in the face of chronic pain. These studies will be discussed in light of understanding how to help the spouses (and in relation, the patient) to deal with the challenge of chronic pain.

## Effects on the Spouse

### Household Effects

Of the four categories of effects that this literature review will cover, household effects are perhaps the easiest to identify because these can be easily measured: filling more roles in the family, finances, and the time spent performing certain activities. Two specific studies showed evidence of "role reversal," or the taking on of extra roles.

The first study surveyed 50 White adults from the Netherlands who were dealing with chronic refractory complex regional pain syndrome (CRPS) (Kemler & Furnee, 2002). Seven of the participants were single and were analyzed separately. Spouses of people diagnosed with CRPS also completed surveys. Researchers found that because people with CRPS are often unable to perform household chores efficiently, their spouses had to put in more hours to complete the unfinished tasks.

In the second study, West, Usher, Foster, and Stewart (2012)

interviewed nine spouses of persons diagnosed with chronic pain in an effort to better understand the experience of chronic pain for the spouse. One of the significant changes that participants listed was revising roles. The study quoted three spouses who directly addressed this situation; one discussed how he had to take on the daily household duties such as changing beds and doing the washing in addition to working outside the home, and another mentioned how the onset of pain in her partner forced her to go to work. Other research has found similar results (Strunin & Boden, 2004).

Both studies also found that finances became a burden, due to medical bills and lack of employment of the individual with chronic pain and in some cases, the spouse. West, Usher et al. (2012) found that there was a wide range of financial difficulties, including one spouse who recalled that because her partner with chronic pain was unable to work, they had to close their business and sell their house, as they could no longer support themselves. The study by Kemler and Furnee (2002) researched this issue through a cost diary, and reported household income before and after CRPS. Both male and female pain patients saw a significant decrease in the ability to work, in many cases resulting in complete unemployment. For example, among the 13 men who participated in the study, only one continued to work—similar results were found among the 30 female patients. Despite some spouses becoming employed for the first time or taking on extra work, the household income decreased by approximately \$2,000 to \$4,000 a year (\$26,200 to \$22,000; \$25,500 to \$22,500, respectively) due to the unemployment of the partner with pain. Moreover, it is important to note that in the Netherlands, those with disabilities are given 70% of their last salary every year until able to work again. Such a significant decrease in income, even with the provided financial assistance, shows that in countries without such benefits, the decrease in income could be much steeper. On top of this, the mean “out-of-pocket expenses” paid by households with CRPS was \$1,350 per year. Experiencing both a decrease in income and an increase in amount spent on medical expenses can create extremely difficult financial situations for the family, which has a direct effect on the spouse.

Another household effect on spouses was the change in how they spent their time. Researchers found that spouses of CRPS patients versus control spouses, spent significantly more time on housekeeping

and household maintenance, while showing significantly less time spent on personal needs and leisure activities (Kemler & Furnee, 2002).

From the findings of role reversal, decreased income, increased financial burdens, and different time allotments, it is easy to see how chronic pain directly affects the spouses and their day-to-day lives. They find themselves in situations that are different from the way they are used to living and are faced with figuring out how to handle their changed lives.

### **Physical Effects**

In addition to household effects, spouses have also been found to experience detrimental physical effects from the pain in their partner's life. Rowat and Knafl (1985) found in interviews with 40 spouses of individuals with chronic pain that 23% described physical complaints such as problems with sleep, appetite, headaches, and blood pressure. Martire, Keefe, Schulz, Stephens, and Mogle (2013) studied sleep disturbances experienced by the spouse through interviews and written logs of daily sleep patterns in 138 couples in which at least one individual was dealing with knee osteoarthritis. The study showed that when the partners were in more pain, the spouses tended to report lower quality of sleep; this was especially true for the couples that had a closer relationship. However, sleep is only one of the ways in which spouses can be physically affected.

In a literature review compiled by Turk, Flor, and Rudy (1987), several studies are described which show that the spouses of those with chronic pain are much more likely to experience actual physical pain. One such study by Block (as cited in Turk et al., 1987) demonstrated an increase in a spouse's heart rate and skin conductance when watching their partner in pain. Flor, Turk and Scholz (1987) studied this phenomenon further by conducting evaluations with 58 males with chronic pain and their spouses. They contrasted their results with those of patients with diabetes and found spouses of people with chronic pain rated a significantly higher amount of pain symptoms than the spouses of patients diagnosed with diabetes. However, the spouses of people with chronic pain did not experience more physical symptoms (e.g. fatigue, nausea). They also found a correlation between spouses' depressed moods and their pain symptoms, but it only explained 25.7% of the variance. Surprisingly, the intensity of the pain experienced by the partner

was not significantly correlated with that of the spouse. This may be because it is more important how the spouse copes with and reacts to the chronic pain in their home than the actual level of pain their partner experiences.

An important item addressed in these studies is the correlation between depression or distress and physical maladies. As will be found throughout, the four different categories of effects are interrelated and affect one another, together creating the total experience of the spouse. Why disturbed sleep and pain are correlated with depression is an interesting question. Are the physical aspects caused by depression, is the depression caused by the physical aspects, or are both a part of the experience? This opens up a lot of opportunity for further questions and studies. Nevertheless, it is clear that chronic pain creates physical problems for the significant other.

### **Mental/Emotional Effects**

Considering all that the spouse is experiencing as his or her partner endures chronic pain, it is not hard to recognize that these experiences may also instigate many moods and emotions within the spouse. Rowat and Knafl (1985) found that of the 123 spouses they interviewed, 69% noted an emotional impact such as fear, nervousness, irritability, sadness, and uncertainty. West, Usher et al. (2012) and Schwartz and Slater (1991) report similar findings. These emotions combine to form the overall feeling of distress in the spouse.

Of the studies that have examined the overall distress of the spouse, some have sought to understand what creates this feeling. Geisser, Cano, and Leonard (2005) found that female spouses were more likely to have affective distress. They also found that the higher spouses perceived the physical disability of their partner in pain and the lower their ratings of marital satisfaction, the greater distress the spouse felt. In comparing low and high distress spouses, Rowat and Knafl (1985) found similar findings as Geisser et al. (2005), adding that in their study, 50% of spouses rated their partner's pain higher than their partner did, in some cases quite significantly.

One important aspect of this distress is the prevalence of depression among spouses of individuals with chronic pain. Many researchers have found a higher number of spouses with depression than typical for a normal sample (Ahern, Adams, & Follick, 1985; Flor, Turk, & Scholz, 1987; Schwartz, Slater, Birchler, & Atkinson, 1991;



Turk et al., 1987). In studying what might help to predict depression in this population, Flor, Turk, and Scholz (1987) found it did not seem to be related to the actual intensity of the pain, but rather to how the partner with chronic pain handled the situation. It was also related to the amount of control the spouse felt he or she had over their life and their satisfaction with the marital relationship. This was also seen in the study by Schwartz et al. (1991). Alternately, Leonard and Cano (2006) conducted a survey of 139 couples with at least one individual experiencing chronic musculoskeletal pain. They found patients' severity of pain was significantly related to spousal depression. However, it is important to note that of the couples studied, multiple couples reported significant chronic pain in both partners. This is an interesting aspect that might confound the findings of the study, for if the spouse is also in significant chronic pain, they would be more statistically likely to be depressed (Fishbain, Cutler, Rosomoff, & Rosomoff, 1997; Goesling, Clauw, & Hassett, 2013). This could also explain Leonard and Cano's (2006) finding that when spouses had personal experiences with chronic pain, they were more likely to be depressed. It could very possibly be related to their own pain, rather than their partners' pain.

These studies show that there are significant emotional and psychological effects associated with chronic pain. However, while some spouses were negatively affected, there are still many that fell into the low distress category, showing that it is possible to have a partner with chronic pain and still be a successful and happy individual.

### **Marital and Partner Relationship Effects**

As might be expected, when one or both partners are in constant pain, the couple's marital relationship is affected (Strunin & Boden, 2004; Subramanian, 1991). Researchers found that one of the most common changes occurs in sexual intercourse. For example, at least 50% of 20 chronic pain patients and their spouses surveyed in a study by Subramanian (1991) reported that their sexual relations had decreased significantly (moderately to severely). Multiple other studies have discovered similar findings, showing that a significant proportion of spouses with chronic pain partners feel that their sexual relations have either been completely discontinued, decreased, or diminished in satisfaction (Flor, Turk, & Scholz, 1987; Schwartz &



Slater, 1991; Strunin & Boden, 2004; Turk et al., 1987; West, Usher et al., 2012). Additionally, multiple studies showed a change in the actual marital relationship and the satisfaction with the relationship (Flor, Turk, & Scholz, 1987; Strunin & Boden, 2004; Turk et al., 1987; West, Usher et al., 2012). West, Usher et al. (2012) summarized that participants “described quite marked changes in the relationships they had now with their partners and significant others when compared with the relationship they had prior to the onset of pain” (p. 3356). In many cases these changes are negative and there is a decrease in relationship satisfaction (Flor, Turk, & Scholz, 1987; Schwartz & Slater, 1991; Strunin & Boden, 2004).

However, in some studies it is clear from the widely varying ratings of marital satisfaction that not all couples that struggle with chronic pain necessarily develop worse or less-satisfactory relationships (Geisser et al., 2005; Polenick, Martire, Hemphill, & Stephens, 2015; Turk et al., 1987). Therefore, scholars have examined what might predict or lead to a decline in the marital relationship (Ahern et al., 1985; Flor, Turk, & Scholz, 1987; Geisser et al., 2005). Flor, Turk, and Scholz (1987) found that the factors that seemed to be the best predictors of a spouse’s satisfaction with their relationship were their own mood and their partner’s satisfaction with the relationship. Combined, these two variables explained 45% of the variance between participants’ outcomes (see also Akbari & Dehghani, 2017).

Several years later, Geisser et al. (2005) performed a study in which 110 couples affected by chronic pain were surveyed in order to further understand factors pertaining to spouses’ moods and marital satisfaction. Some of the clearest associations they found were related to perceived disability, both psychosocial and physical. The greater the perceived difference between the patient and their spouse as to the level of physical disability experienced by the person with chronic pain, the greater the marital dissatisfaction. This seemed to be particularly true when the spouse saw the physical disability of their partner as being greater than the partner did (see also Rowat & Knofl, 1985). Researchers also found that lower marital satisfaction was correlated with higher ratings of physical disability by the spouse, as well as higher perceived levels of psychosocial disability by both the partner with chronic pain and their spouse (see also Cano, Miller,

& Loree, 2009). Interestingly, it was also found that higher reported pain by the patient was related to greater spousal marital satisfaction. Another study found the same result and provided a theory as to why greater pain could lead to a better relationship. They posited that greater pain would lead to more time spent with the partner, which would improve the relationship (Bermas, Tucker, Winkelman, & Katz, 2000).

An important point to note about the effects on the spousal relationship is that while there are obvious downsides that affect a wide majority of partners dealing with chronic pain and their spouses (such as decreased sexual relations), not all couples experience a negative marital relationship (Bermas et al., 2000). This will be discussed further in the next section in order to better understand how to help spouses of those with chronic pain overcome the negative aspects of chronic pain.

### **How to Help Spouses Thrive**

As has been demonstrated through this review, many detrimental consequences of chronic pain affect not only the person dealing with the pain, but also the spouse. There may be some aspects that cannot be avoided, such as pain, finances, role reversal, and the decrease of sexual relations; however, it has been shown that some aspects, such as spousal distress, depression, and satisfaction in the marital relationship are dependent on the situation and couple. For example, Subramanian (1991) revealed that spouses' scores on the Psychosocial Adjustment to Illness Scale (PAIS) were widely distributed, ranging from 6 to 88 ( $M=47.15$ ,  $SD=20.9$ ). This shows that there is a wide variety in spouses' reactions and in how they handle their situations.

Perhaps one of the most hopeful studies was conducted by West, Buettner, Stewart, Foster, and Usher (2012) who studied the resilience in 31 families dealing with chronic pain. The authors described individual resilience as a way of handling adversity which leads to an individual becoming stronger and having a greater ability to deal with future adversity. Building off of that, familial resiliency is a family's way of managing adversity which helps them to cope with the crisis and leads to the family becoming more resourceful and a stronger unit. Although the study was conducted on families, the authors stated that the majority of families consisted of merely the

partner with chronic pain and his or her spouse. In addition, one of the main qualitative parts of the study took information from only 10 families, all of which were only couples. Some important findings from this study showed that families dealing with chronic pain tended to be more resilient than the average family. However, even within this sample of families with chronic pain, there were varying levels of resiliency. Researchers found that those who were more resilient tended to be more positive about their family member's pain and to handle challenges in different ways. In addition, pain had less of an impact on families with higher resiliency. This shows that by helping spouses and couples to become more resilient, they might be able to have greater life satisfaction and to have a better experience as they deal with their pain. Furthermore, the 10 couples interviewed stated unanimously that an important part of staying strong throughout the chronic pain experience was "commitment from and cohesion with a partner or soul mate" (p. 3536). Multiple studies also mentioned the importance of support from the partner (Subramanian 1991; Turk et al., 1987). From these findings, strengthening the couple's relationship would seem to create a better environment for them to thrive.

The idea of resilience suggests that there is a way for couples to deal with trials and the problem of chronic pain in a healthy way that leads to better outcomes. This idea is strengthened through studies which show that using the coping mechanism of catastrophizing—an exaggerated negative orientation towards the pain which is then communicated to others—makes spouses more likely to experience psychological distress and depressive symptoms (Akbari & Dehghani, 2017; Prenevost & Reme, 2017). Studies have also shown that when the spouse recalled a time when they had helped their partner in pain they felt less distress and that chronic pain couples who used more humor tended to have greater marital satisfaction (Monin, Xu, Mitchell, Buurman, & Riffin, 2017; Johanson & Cano, 2007). These findings demonstrate that there do seem to be certain ways which can either mitigate or increase the negative effects of chronic pain. If healthy coping mechanisms are taught as a replacement for negative coping mechanisms, it might help couples to become more resilient.

In addition to the suggestion of strengthening couples' relationships and helping them become more resilient, researchers also recommend that spouses receive outside support. In the discussions of

a large majority of studies, advice or hypotheses were given regarding the importance of supporting the spouse and involving them in the process of creating a treatment plan for dealing with the pain. This would mean both the partner with chronic pain and the spouse receiving outside help, rather than only focusing on the partner with chronic pain receiving outside support (Ahern et al., 1985; Flor, Turk, & Rudy, 1987; Leonard & Cano, 2006; Rowat & Knafl, 1985; West, Usher et al., 2012; West, Buettner et al., 2012). Subramanian (1991) noted that those spouses who received support from sources such as social workers, psychologists, or psychiatrists rated the amount and quality of support they had received as being much more helpful than other types of support (e.g. extended family, neighbors). However, only 20-25% of spouses from the study had reached out to these sources, demonstrating that spouses rarely tend to turn to these sources. If the practice of spouses of people with chronic pain turning to therapists for outside assistance could be normalized, the lives of these spouses could improve.

One last important idea that has been mentioned by most studies is the importance of integrating the spouse in the process of dealing with the pain (Flor, Turk, & Rudy, 1987; Schwartz et al., 1991; Swift, Reed, & Hocking, 2014; West, Usher et al., 2012; West, Buettner et al., 2012). Miller-Matero & Cano (2015) conducted a study in which they had chronic pain couples sit through a couples' therapy session which included a motivational assessment and motivational interview. Compared to the control group, the therapy group had significantly higher outcomes including improved marital satisfaction and positive mood, and decreased negative mood and personal distress. In the case example given, following the therapy session the spouse of the individual with chronic pain rated their marital satisfaction 2 points higher, their positive mood 24 points higher, their negative mood 4 points lower and their personal distress 18 points lower. A single therapy session in which the couple worked through the issue of the chronic pain was found to be extremely beneficial to the spouse (see also Miller, Cano, & Wurm, 2013). Chronic pain has such far-reaching effects in the lives of everyone around it that it is important that there is information and help for the spouses. Through this, they can have better feelings of control and support in their situations.

## **Conclusion**

Spouses of those dealing with chronic pain are clearly highly affected by the onset of pain in their partner. They are affected in multiple aspects of their lives, all of which typically interact with one another. These effects include household problems, physical problems, mental/emotional problems, and marital problems. The literature reviewed shows that spouses frequently have to deal with financial concerns, role reversals, changes in lifestyle, and alterations in how they spend their time (Kemler & Furnee, 2002; West, Usher et al., 2012). Additionally, spouses of people with chronic pain may experience increased pain themselves and deal with other physical maladies such as lack of sleep (Martire et al., 2013; Turk et al., 1987). Findings also show that an element of distress affects the spouse, which can ultimately lead to conditions such as depression (Ahern et al., 1985; Rowat & Knafl, 1985; Schwartz et al., 1991). Finally, chronic pain affects marital relationships, causing many spouses to report decreased sexual relations and, in some cases, decreased marital satisfaction (Strunin & Boden, 2004; Subramanian, 1991; West, Usher et al., 2012).

With such a life-altering experience, it is important that support and guidance be provided not only to the partners with chronic pain, but to their spouses' as well. Support can be provided for spouses by increasing the normalcy of using therapists as they deal with the chronic pain of their mates. It would also be beneficial to strengthen the relationship of the couple and create a treatment plan, not just for the person afflicted by chronic pain, but also for the couple as a unit. As these aspects are provided and as spouses and couples become more resilient, or rather, more able to handle the adversity of chronic pain in a healthy way, the couples may thrive and overcome some of the negative aspects of living with chronic pain.

It is apparent that further research is needed, because the literature is severely lacking in many areas. One such area is the effect of chronic pain on young married adults, since much of the literature focuses on the experiences of older couples. Additionally, further studies are needed to better understand what helps some couples to thrive. This could include topics such as resiliency, coping mechanisms, increasing marital satisfaction, and reports on the various types of therapies, treatments, and support extended to the couple as a whole rather than

only the person with chronic pain or only the spouse. The more that is understood about how families and spouses are affected by chronic pain, the more help can be offered to them to find greater overall life satisfaction.

## References

- Ahern, D. K., Adams, A. E., & Follick, M. J. (1985). Emotional and marital disturbance in spouses of chronic low back pain patients. *The Clinical Journal of Pain*, 1(2), 69-74. doi:10.1097/00002508-198501020-00003
- Akbari, F., & Dehghani, M. (2017). Pain in the context of family: A study on factors contributing to marital satisfaction among couples suffering from chronic pain. *Iranian Journal of Public Health* 46(7), 964-972.
- American Chronic Pain Association. (2017). *Conditions A to Z*. Retrieved from <https://theacpa.org/conditions>
- Bernas, B. L., Tucker, J. S., Winkelman, D. K., & Katz, J. N. (2000). Marital satisfaction in couples with rheumatoid arthritis. *Arthritis & Rheumatism*, 13(3), 149-155. doi:10.1002/1529-0131(200006)13:33.0.co;2-w
- Breivik, H., Collett, B., Ventafridda, V., Cohen, R. & Gallacher, D. (2006). Survey of chronic pain in Europe: Prevalence, impact on daily life, and treatment. *European Journal of Pain*, 10, 287. doi:10.1016/j.ejpain.2005.06.009
- Cano, A., Miller, L. R., Loree, A. (2009). Spouse beliefs about partner chronic pain. *The Journal of Pain*, 10(5), 486-492. doi:10.1016/j.jpain.2008.11.005
- Fishbain, D. A., Cutler, R., Rosomoff, H. L., & Rosomoff, R. S. (1997). Chronic pain-associated depression: Antecedent or consequence of chronic pain? A review. *The Clinical Journal of Pain*, 13(2), 116-137. doi:10.1097/00002508-199706000-00006
- Flor, H., Turk, D. C., & Rudy, T. E. (1987). Pain and families II. Assessment and treatment. *Pain*, 30(1), 29-45. doi:10.1016/0304-3959(87)90081-9
- Flor, H., Turk, D. C., & Scholz, O. B. (1987). Impact of chronic pain on the spouse: Marital, emotional and physical consequences. *Journal of Psychosomatic Research*, 31(1), 63-71. doi:10.1016/0022-3999(87)90099-7
- Geisser, M. E., Cano, A., & Leonard, M. T. (2005). Factors associated with marital satisfaction and mood among spouses of persons with chronic back pain. *The Journal of Pain*, 6(8), 518-525. doi:10.1016/j.jpain.2005.03.004
- Goesling, J., Clauw, D. J., & Hassett, A. L. (2013). Pain and depression: An integrative review of neurobiological and psychological factors. *Current Psychiatry Reports*, 15(12). doi:10.1007/s11920-013-0421-0
- Johansen, A. B. & Cano, A. (2017). A preliminary investigation of affective interaction in chronic pain couples. *Pain*, 132, S86-S95. doi:10.1016/j.pain.2007.04.016
- Kemler, M. A., & Furnée, C. A. (2002). The impact of chronic pain on life in the household. *Journal of Pain and Symptom Management*, 23(5), 433-441. doi:10.1016/s0885-3924(02)00386-x
- Korff, M. V., Ormel, J., Keefe, F. J., & Dworkin, S.F. (1992). Grading the severity



- of chronic pain. *Pain*, 50(2). doi:10.1016/0304-3959(92)90154-4
- Leonard, M. T., & Cano, A. (2006). Pain affects spouses too: Personal experience with pain and catastrophizing as correlates of spouse distress. *Pain*, 126(1), 139-146. doi:10.1016/j.pain.2006.06.022
- Leonard, M. T., Cano, A., & Johansen, A. B. (2006). Chronic pain in a couples' context: A review and integration of theoretical models and empirical evidence. *The Journal of Pain*, 7(6), 377-390. doi:10.1016/j.jpain.2006.01.442
- Martire, L. M., Keefe, F. J., Schulz, R., Stephens, M. A., & Mogle, J. A. (2013). The impact of daily arthritis pain on spouse sleep. *Pain*, 154(9), 1725-1731. doi:10.1016/j.pain.2013.05.020
- Miller, L. R., Cano, A., & Wurm, L. H. (2013) A motivational therapeutic assessment improves pain, mood, and relationship satisfaction in couples with chronic pain. *The Journal of Pain*, 14(5), 525-537. doi:10.1016/j.jpain.2013.01.006
- Miller-Matero, L. R., & Cano, A. (2015). Encouraging couples to change: A motivational assessment to promote well-being in people with chronic pain and their partners. *Pain Medicine*, 16(2), 348-355. doi:10.1111/pme.12600
- Monin, J. K., Xu, A., Mitchel, H., Buurman, F., & Riffin, C. (2017) Recalling support provision decreases distress and anger in response to partner suffering. *Aging and Mental Health*, 1-8. doi:10.1080/13607863.2017.1286452
- Polenick, C. A., Martire, L. M., Hemphill, R. C., & Stephens, M. A. (2015). Effects of change in arthritis severity on spouse well-being: The moderating role of relationship closeness. *Journal of Family Psychology*, 29(3), 331-338. doi:10.1037/fam0000093
- Prenevost, M. H., Reme, S. E. (2017). Couples coping with chronic pain: How do intercouple interactions relate to pain coping? *Scandinavian Journal of Pain*, 16, 150-157. doi:10.1016/j.sjpain.2017.05.010
- Rowat, K. M., & Knafl, K. A. (1985). Living with chronic pain: The spouse's perspective. *Pain*, 23(3), 259-271. doi:10.1016/0304-3959(85)90104-6
- Schwartz, L., & Slater, M. A. (1991). The impact of chronic pain on the spouse: Research and clinical applications. *Holistic Nursing Practice*, 6(1), 9-16. doi:10.1097/00004650-199110000-00005
- Schwartz, L., Slater, M. A., Birchler, G. R., & Atkinson, H. J. (1991). Depression in spouses of chronic pain patients: The role of patient pain and anger, and marital satisfaction. *Pain*, 44(1), 61-67. doi:10.1016/0304-3959(91)90148-q
- Strunin, L., & Boden, L. I. (2004). Family consequences of chronic back pain. *Social Science & Medicine*, 58(7), 1385-1393. doi:10.1016/s0277-9536(03)00333-2
- Subramanian, K. (1991). The multidimensional impact of chronic pain on the spouse. *Social Work in Health Care*, 15(3), 47-62. doi:10.1300/j010v15n03\_03
- Swift, C. M., Reed, K., & Hocking, C. (2014). A new perspective on family involvement in chronic pain management programmes. *Musculoskeletal Care*, 12, 47-55. doi:10.1002/msc.1059



- Turk, D. C., Flor, H., & Rudy, T. E. (1987). Pain and families: I. Etiology, maintenance, and psychosocial impact. *Pain, 30*(1), 3-27. doi:10.1016/0304-3959(87)90080-7
- West, C., Usher, K., Foster, K., & Stewart, L. (2012). Chronic pain and the family: The experience of the partners of people living with chronic pain. *Journal of Clinical Nursing, 21*(23-24), 3352-3360. doi:10.1111/j.1365-2702.2012.04215.x
- West, C., Buettner, P., Stewart, L., Foster, K., & Usher, K. (2012). Resilience in families with a member with chronic pain: A mixed methods study. *Journal of Clinical Nursing, 21*(23-24), 3532-3545. doi:10.1111/j.1365-2702.2012.04271.x