



EFFECT OF CHRONIC PAIN ON PATIENT'S PSYCHOSOCIAL WELLBEING - A SYSTEMIC REVIEW

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ABSTRACT

Background: Chronic pain (CP) has multiple effects on the patient's quality of life. Earlier various studies have considered effects of pain on the patient's social and professional environment and few studies have focused on impact of patient's pain on family members. Our purpose is to review the literature and assess several aspects of CP influencing patient's psychosocial environment and quality of life. After reviewing the data, we concluded that CP has detrimental effect on patient's life and psychological well-being, it also hampers the quality of life of the family members and care takers. Thus, there is the need of multidisciplinary and comprehensive approach to overcome the consequences of CP. Further need of research initiatives in social and family context is required.

Method: A search was conducted for articles published between 2010-2021 in the electronic databases. Three electronic databases (PubMed, Google Scholar, and Science Direct) was used to identify peer-reviewed published based on the effect of pain on the psychosocial wellbeing. Multiple combinations of the terms were employed including chronic pain, social effects, daily difficulties, regular exercise, quality of life, sleep, work, family. Consequently, the following search phrases were employed: "chronic pain" AND (psychosocial consequences" OR "everyday issues" OR "physical activity" OR "quality of life" OR "sleep" OR "job" OR "household". A total of 80 studies were identified for this review. Of them, 65 remained after removing duplication. Finally, 29 articles were kept as remaining have only abstract or no relevance to the study hypothesis.

Result: The current review found effect of chronic pain on the psychosocial aspect of life. Additionally, the current review reveals that the chronic pain is important health concern impacting physically and mentally. Psychosocial effects included anxiety, depression, isolation, and low self-esteem. Suffering with chronic pain impacts on every aspect of patient's life and interferes with the ability to perform various activities such as usual household chores and even in employment. Various studies have shown loss of employment, friends, social circle, and family members associated with consequences of chronic pain which could further enhance psychological impact.

Conclusion: CP has multidisciplinary consequences on patient's social, professional, and family environment. It not only affects quality of life of patients but also the care givers and family. Inadequate diagnosis creates more frustration among patients and family members. Cost related to treatment also creates challenge to the economy. However, improved health care guidelines and policies should be developed to manage disabilities caused by pain. Moreover, considering pain as a community health priority will help develop better social and economic aspects of health.

INTRODUCTION

Chronic pain is a multidimensional phenomenon causing physical suffering and loss of productivity. When pain persists, influence can be seen on all aspects of life (Sarah Mills., 2016) Earlier chronic pain was considered co-morbidity associated with underlying disease but it is not just limited to co morbidity (P croft, 2015). Studies performed in numerous departments have demonstrated that CP affects between 10% and 30% of the adult population in Europe (K reid et al, 2011). As per WHO standards any pain lasting more than three months will be considered chronic pain. But considering chronic pain solely by time duration does not indicate severity and suffering it is more than that as it not only affects the patient but it also hampers his social circle (Ojeda B,2014) and families. Chronic pain is often demoralizing which is mostly associated with affecting factors such as to Depression, isolation, and anger, augmenting each other over time. Numerous studies have revealed the effects of chronic pain (CP) on the patients and animal models (MC Bushnell et al, 2015). Few studies have also predicted psychological parameters of treatment prognosis in chronic pain (T Ojala et al, 2014). The aim of this systematic review is to perform a more comprehensive study on family life, socioeconomic and psychological parameters in all manifestations of chronic pain. To achieve this, outcome measures of pain intensity, quality of life, pain interference and global ratings of improvement were included in accordance with IMMPACT recommendations (Dworkin et al, 2010). Consequences on routine activity and health-related quality of life in relation to CP were initially considered, afterwards repercussions of CP at social circle is reviewed.

METHOD

A search was conducted on articles published between 2010 and 2021 in the electronic databases. Three electronic databases (PubMed, Google Scholar, and Science Direct) were used to identify peer-reviewed published based on the effect of pain on the psychosocial wellbeing. Multiple combinations of the terms were employed including chronic pain, social effects, daily difficulties, regular exercise, quality of life, sleep, work, family. Consequently, the following search phrases were employed: "chronic pain" AND (psychosocial consequences" OR "everyday issues" OR "physical activity" OR "quality of life" OR "sleep" OR "job" OR "household".

The design and methodology for this review of literature are described in Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA). The PICO guidelines were used to determine eligibility requirements which are depicted in Fig -1. Various combinations of keywords were processed. These search terms were combined with Boolean operators OR and AND to broaden or narrow the search. Additional studies were included by searching randomly on the databases. We then checked the reference lists of the original and review articles that the initial search had yielded to identify additional full-text articles. A total of 80 studies were identified for this review. Of them, 65 remained after removing duplication. Finally, 29 articles were kept as remaining have only abstract or no relevance to the study hypothesis.

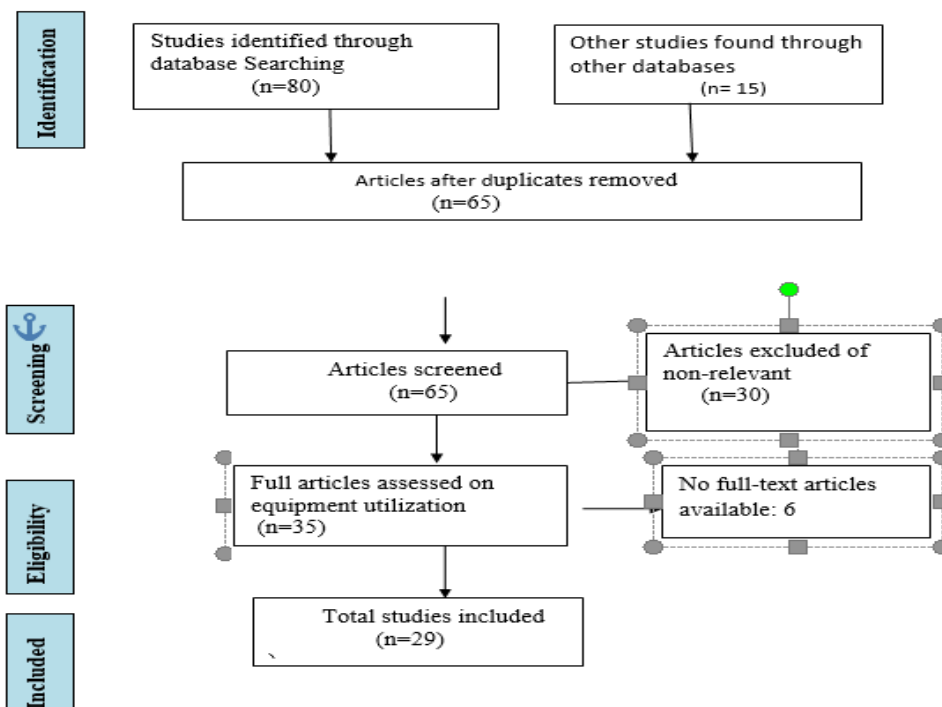


figure 1: Prisma flow chart

RESULT

Analysis of consequences of chronic pain was done on various aspects such as

- Physical and psychological effect on patient
- Effect on work and social circle of patient
- Effect on family members of patient

Physical and psychological effect on patient

Several studies have shown that chronic pain has traumatized patient physically as well as psychologically. In a study it was revealed the physical disability and depression is highly prevalent in chronic pain and prominently affects functioning and quality of life (SF Lerman, 2015). Patient with chronic pain often have derogatory self-image reflecting their negative aspects towards another person. It was analyzed that CP has strong negative impact on self-confidence and identity and patient. Also associated anxiety and depression is well shown in CP patients (T Ojala et al, 2014). Moreover, various independent studies (L Anderson, 2017) have shown limitations of patients in performing physical exercise, daily domestic chores, walk or even some have trouble in getting up or sitting down (Amris K, 2011).

Effects of pain intensity are demonstrated to be linked to health-related quality of life. Patients with more pain intensity have lower quality of life (Langley P, 2011). numerous studies were carried out on patients with rheumatoid arthritis, fibromyalgia or low back pain have revealed that these conditions generally hamper the patient's quality of life (Y Lee, 2012) (Taylor and Francis, 2015). Moreover, patients with moderate and non-recurrent pain have better impact on quality of life as compared to patients with severe and reoccurring pain. Furthermore, anxiety, depression, and emotion-focused coping strategies, affected the health-related quality of life index of fibromyalgia patients (Campos RP, 2012). Increased level of stress and anxiety is often associated with sleep deprivation and insomnia, which in turn again augments the pain intensity (Quartana PJ, 2010).

Effect On Work and Social Circle Of Patient

Highest disability was seen in relation with responsibilities associated with home, occupation, recreational activities (Azevaco, 2012). A survey and study also shown that the effect on community such as employment is directly associated with intensity of pain and disability caused (L Anderson, 2017). It impacts most to the lower socioeconomic status, both the prevalence and severity of CP is seen higher in lower socioeconomic society (Maly, 2018). Data collected from various studies revealed that the most common impact of pain is absenteeism from work or less productivity leading to their job loss (Grant, 2019). Patients often need to take early retirement or change duties (Breivik H, 2013). The sick leaves were mostly caused by lower back ache followed by rheumatic disease and fibromyalgia (Galvez-Sánchez, 2019). Furthermore, longer duration of sick leaves was associated with poor recovery rate (Coasta 2010). These circumstances further affect patient's economic growth and continuing normal lifestyle.

CP also affects patient's social interactions, restricting their social contacts and inhibiting them to participate in leisure activities. Indeed, many patients have reported that pain restrict them from attending social events (Duenas,2016). Impaired social integration was mostly seen in patients with neuropathic pain due to decline in mental. Moreover, the negative emotions, anger and irritability have a detrimental impact on interpersonal relationships (Koechlin H 2021). In a qualitative study it was revealed that patients with neuropathic pain find it difficult to plan social activity because of unpredictable nature of pain, which is the main cause of their social isolation (B Newton, 2013).

Effect on family members of patient

The extent of suffering is not only limited to the patient but also causes consequences for the family (M duenas,2016). The family members have to perform multiple task such as care duties, at home medicine intervention, consulting physicians etc. (D Turk, 2016). These obligations produce negative effects of physical and psychological deterioration to the family. They often feel overburdened, frustrated, tired and helpless (M Chen, 2014). Numerous studies has analyzed the impact of pain on relatives who are home caregivers, which shown that over 30% of the patients could not handle the pain related problems and thus affecting their care giver (Richard Schultz 2020)

This was even revealed in a study, that family of patients with pain does not perform well socially and suffered with depression and anxiety which was associated with the intensity of pain in patient (M Chen, 2014). It was also seen that 60%–70% caregivers also suffered with one or more related pathologies (S Otis-Green, 2012). Social deprivation caused by limited social gatherings and interactions often cause feeling of loneliness (Ojeda B et al, 2014). A study demonstrated significant relationship changes with friends and family in women with fibromyalgia and its associated chronic pain (R Campos 2011).

Role reversal is also observed in families when a patient suffering from pain no longer capable to perform their roles and duties as a member (J Armentor 2016). A study elsewhere reported that it is an overwhelming experience for the home caregivers to see their loved ones in pain (C West 2012). It is not only limited to social or psychological aspect but financial aspects are also observed. A study shown that partners of the patients have to take leaves form the job or left jobs to remain at home for taking care of the patient which leads to significant monetary set back (Grol-Prokopczyk, 2016). Financial burdens could even have catastrophic life implications. This could be even worse in the low-income families. Further, a wide disparity is seen in perceiving level of pain by partners and disability experienced by the patient (T Dorner 2011)

DISCUSSION

The current article systematically reviewed the effect of chronic pain on the psychosocial aspect of life. Additionally, to reduce risk bias a set of criteria to assess the quality of each study is included in this review. The current review reveals that the chronic pain is important health concern impacting physically and mentally. Psychosocial effects included anxiety, depression, isolation, and low self-esteem (Lerman SF, 2015). Suffering with chronic pain impacts on every aspect of patient's life and interferes with the ability to perform various activities such as usual household chores and even in employment (SF Lerman, 2015).

Various studies have shown loss of employment, friends, social circle, and family members associated with consequences of chronic pain which could further enhance psychological impact. Pain does not only produce consequences but all the factors in return affect the intensity of pain. Ability to thrive is directly associated with the intensity of pain (Richard, 2020). It was also well reported the impact on family could be devastating. Members of family also suffer psychologically and socially. Financial consequences were also catastrophic caused by unemployment of frequent leaves. The link between low socioeconomic status, poor health-related quality of life and the existence of chronic pain, has been demonstrated (PD Jesus, 2021). We found most of the studies considered were from developed countries and few were associated with low socioeconomic status. Hence, the need to conduct more studies on developing countries is required as low-income countries have reported higher prevalence of CP and disability than developed ones (Jackson T, 2016). Further, many studies revealed the impact of pain on psychosocial nature of patient but only few considered the impact on families and care takers (Caryn, 2012). Thus, more studies with large sample size required to discuss the consequences and impact of patient's pain on family. Multidisciplinary and Comprehensive approach in diagnosis and treatment should be emphasized to reduce the time and cost of treatment and to improve the overall condition of patient. Both Physical and psychological factors should be considered to achieve this goal. Moreover, the research and survey should be performed to analyze the support required by family while handling pain patients.

CONCLUSION

CP has multidisciplinary consequences on patient's social, professional, and family environment. It not only affects quality of life of patients but also the care givers and family. Inadequate diagnosis creates more frustration among patients and family members. Cost related to treatment also creates challenge to the economy. However, improved health care guidelines and policies should be developed to manage disabilities caused by pain. Moreover, considering pain as a community health priority will help develop better social and economic aspects of health.

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Annexure: 1 studies used for the systemic review

	STUDY	DESIGN	PARTICIPATING POPULATION	QUESTION RELEVANCE
1	Amris, K., Wæhrens, E., Jespersen, A., Bliddal, H., & Danneskiold-Samsøe, B. (2011). Observation-based assessment of functional ability in patients with chronic widespread pain: A cross-sectional study. <i>Pain, 152</i> (11), 2470-2476.	Cross- Sectional Observational Study	Women With Chronic Widespread Pain And Fibromyalgia	Functional Ability And Performance Difficulties
2	Azevedo, L., Costa-Pereira, A., Mendonça, L., Dias, C., & Castro-Lopes, J. (2012). Epidemiology of Chronic Pain: A Population-Based Nationwide Study on Its Prevalence, Characteristics and Associated Disability in Portugal. <i>The Journal Of Pain, 13</i> (8), 773-783.	Cross-Sectional Nationwide Epidemiological Study	Portuguese Adult Population	Impact On Chronic Pain On Social Factors
3	Breivik, H., Eisenberg, E., & O'Brien, T. (2013). The individual and societal burden of chronic pain in Europe: the case for strategic prioritisation and action to improve knowledge and availability of appropriate care. <i>BMC Public Health, 13</i> (1).	Review Article	Nil	Personal And Socioeconomic Impact Of Chronic Pain
4	Campos, R., & Vázquez Rodríguez, M. (2011). Erratum to: Health-related quality of life in women with fibromyalgia: clinical and psychological factors associated. <i>Clinical Rheumatology, 31</i> (2), 401-401.	Cross Sectional Study	Adult Portuguese Women	Effect Of Fibromyalgia On Health Care Quality Of Life And Psychology
5	Bushnell, M., Case, L., Ceko, M., Cotton, V., Gracely, J., & Low, L. et al. (2015). Effect of environment on the long-term consequences of chronic pain. <i>Pain, 156</i> (Supplement 1), S42-S49	Review Article	Nil	Role Of Environmental Factors
6	Jackson, T., Thomas, S., Stabile, V., Han, X., Shotwell, M., & McQueen, K. (2016). Chronic Pain Without Clear Etiology in Low- and Middle-Income Countries. <i>Anesthesia & Analgesia, 122</i> (6), 2028-2039.	Narrative Review	Nil	Demographic And Psychosocial Associations With Chronic Pain
7	Maly, A., & Vallerand, A. (2018). Neighborhood, Socioeconomic, and Racial Influence on Chronic Pain. <i>Pain Management Nursing, 19</i> (1), 14-22.	Questionnaire	Nil	Associations Between Depression, Anxiety, Pain And Pain-Related Disability
8	Maly, A., & Vallerand, A. (2018). Neighborhood, Socioeconomic, and Racial Influence on Chronic Pain. <i>Pain Management Nursing, 19</i> (1), 14-22.	Review Article	Nil	Multifactorial Influences On Chronic Pain

9	McBeth, J., Nicholl, B., Cordingley, L., Davies, K., & Macfarlane, G. (2010). Chronic widespread pain predicts physical inactivity: Results from the prospective EPIFUND study. <i>European Journal Of Pain</i> , 14(9), 972-979.	Cohort Study	General Population Between Age 25-65 Years	Association Between Chronic Pain And Physical Activity
10	Mills, S., Nicolson, K., & Smith, B. (2019). Chronic pain: a review of its epidemiology and associated factors in population-based studies. <i>British Journal Of Anaesthesia</i> , 123(2), e273-e283.	Review Article	Nil	Problems At Individual And Population Level
11	Ojeda, B., Salazar, A., Dueñas, M., Torres, L., Micó, J., & Failde, I. (2014). The impact of chronic pain: The perspective of patients, relatives, and caregivers. <i>Families, Systems, & Health</i> , 32(4), 399-407.	Cross Sectional Study	Spanish Adults Who Suffered Pain	Impact Of Chronic Pain On The Family Environment
12	van Hecke, O., Torrance, N., & Smith, B. (2013). Chronic pain epidemiology and its clinical relevance. <i>British Journal Of Anaesthesia</i> , 111(1), 13-18.	Review Article	Nil	Socio-Demographic, Clinical, Psychological, And Biological Factors Associated With Chronic Pain
13	Ojala, T., Häkkinen, A., Karppinen, J., Sipilä, K., Suutama, T., & Piirainen, A. (2014). Chronic pain affects the whole person – a phenomenological study. <i>Disability And Rehabilitation</i> , 37(4), 363-371	Qualitative Study, Descriptive Questionnaire	Chronic Pain Outpatients	Explore Participants' Perspectives On The Effects Of Chronic Pain On The Psychophysical Unity
14	Andersen, L., Persson, R., Jakobsen, M., & Sundstrup, E. (2017). Psychosocial effects of workplace physical exercise among workers with chronic pain. <i>Medicine</i> , 96(1), e5709.	Randomized Controlled Trial	Workers With Upper Limb Chronic Musculoskeletal Pain	Physical Exercise On Psychosocial Factors Among Workers With Chronic Musculoskeletal Pain.
15	Grant, M., O-Beirne-Elliman, J., Froud, R., Underwood, M., & Seers, K. (2019). The work of return to work. Challenges of returning to work when you have chronic pain: a meta-ethnography. <i>BMJ Open</i> , 9(6), e025743.	Qualitative Research	Nil	Obstacles To Returning To Work In Chronic Pain
16	Duenas, M., Ojeda, B., Salazar, A., Mico, J., & Failde, I. (2016). A review of chronic pain impact on patients, their social environment and the health care system. <i>Journal Of Pain Research</i> , Volume 9, 457-467.	Review Article	Nil	Effects On The Patient's Social And Family Environment
17	Koehlin, H., Beeckman, M., Meier, A., Locher, C., Goubert, L., Kossowsky, J., & Simons, L. (2021). Association of parental and adolescent emotion-related factors with adolescent chronic pain behaviors. <i>Pain</i> , 163(7), e888-e898.	Questionnaire	Adolescents And Their Parents	Emotional Role Of Chronic Pain

18	Turk, D., Fillingim, R., Ohrbach, R., & Patel, K. (2016). Assessment of Psychosocial and Functional Impact of Chronic Pain. <i>The Journal Of Pain</i> , 17(9), T21-T49.	Review Article	Nil	Psychosocial And Functional Consequences Of Chronic Pain
19	Schulz, R., Beach, S., Czaja, S., Martire, L., & Monin, J. (2020). Family Caregiving for Older Adults. <i>Annual Review Of Psychology</i> , 71(1), 635-659.	Review Article	Nil	Impact On Caregiver
20	Armentor, J. (2016). Living With a Contested, Stigmatized Illness. <i>Qualitative Health Research</i> , 27(4), 462-473.	Quantitative Interview Research	Women Diagnosed with Fibromyalgia	Negotiation Of Relationships Among Women Living with The Chronic Illness Fibromyalgia

