

## The Influence of Psychological Factors on Pain in Diabetic Patients

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### ABSTRACT

Diabetes has been associated with chronic metabolic disorder leading to physical, mental and psychological well-being. These patients live their whole life with multiple complications and pain. Diabetes is the biggest contributor for foot pain among the patients. The unmanageable pain led to psychosocial problems that impacts their well-being and emotional state. Understanding about such psychological influences of pain on diabetic patients which could be their personal experiences, cognitions, expectations, perceived control and anxiety can be helpful in their treatment, associated with speedy recovery and self-care. The current review paper therefore examines these psychological influences especially on diabetic patients and when unmanaged can lead to emotional distress and negative thought processes. These negative emotional cognitions impair their recovery and other psychological interventions. Search was performed to know psychological factors in pain and its relevance to diabetic patients, understanding this will support patients and medical practitioners in dealing with their patients. To improve their psychological stress and ability to cope and manage pain.

*Keywords: Pain, Diabetes, Psychological factors, Self-Care*

Pain is an uncomfortable feeling, characterized as a unique personal experience that forewarn us that something is physically wrong. Initially individuals complain of some physical symptoms such as pinching, throbbing etc. but if appropriate action is not taken against these symptoms, it can alleviate the problem. These symptoms act like a biological safety mechanism for a person that essentially guides for future course of action, which might just include to get relieved from such pain. For many of us, the presence of pain is associated with fear that indicates danger. The fear here is linked with well-being of an individual so that they can get relieved from such pain. But it is also important for us to understand that there is little relationship between severity of pain and danger attached to any conditions. For example, a cancerous lump which might be life threatening but bring no pain at all; a serious heart attack may simply involve a feeling that you could have indigestion. Thus, we tend to ignore the condition till the time that uncontrollable pain is experienced and then a delay to rush towards the hospital.

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So, pain may be defined as “a state of physical, emotional and lack of mental well - being, furthermore it includes uneasiness that might range from mild distress to acute agony, may be generalized or localized, and is the consequences of being injured or hurt physically or mentally, that usually produces a reaction of wanting to avoid, escape, or sometimes even destroy the causative factors and its effects” (Merriram Webster’s Medical Desk Dictionary, MWMDD, 1996). Therefore, it is an emotional experience comprising of sensory discomfort usually allied with tissue damage, sensory or blood circulation problems.

Pain is also explained through our psychological experiences that includes “personal, private sensations of hurt, a harmful stimulus which might lead to impending tissue damage and also a pattern of responses which operate to protect the organism from any sort of harm”. For example, the more pain an individual experiences, the more likely he or she is to consume healthcare services. In recent review studies it has been found that individuals having mental health difficulties are the ones more frequently reporting about pain and seek care by medical physician. Medical patients with more mental health problems and more reported pain have longer hospital stays about 40% (Levenson et al.,1990).

Hence it become essential for us to cognize the effects of pain upon the patient to avoid any future psychological effects. Pain is experienced with patients of different diseases, amongst them is diabetes. Data reveals that one in six people suffer from diabetes in India only. Which places India among the top 10 countries for people who suffer from diabetes. Therefore, it needs effective management programs for patients of diabetes, where they need help for their multiple concerns. Most prominent is that these patients tend to seek relief from painful foot problems. There are mainly four types of foot problems which these patients experience and thus seek for immediate relief from the pain. Pain can be due to nerve problems, blood circulation problem, Muscle and joint problems and due to frequent infections.

This paper is an attempt to understand the psychological influence on pain in diabetic patients who complain about foot pain. It has been seen that diabetic patients tend to get affected in their nerves first which is termed as Peripheral Neuropathy. Further to this Peripheral Neuropathy is pain felt in nerves which is usually a tingling, aching, throbbing or sharp pain due to increased insulin in the body which damages the nerves. Peripheral Neuropathy can be characterized as Sensory, Motor and Autonomic Neuropathy. Majority of diabetic patients experience Sensory Neuropathy which is sensitive pain felt in feet. Pain experienced by patients may be in form of acute or chronic pain. Acute Pain are temporary and short in duration that may last for less than six months. This type of pain can cause lot of discomfort and for some patients it can lead to distress/ anxiety. Patients seek for immediate relief from such pain and typically subsides either through painkillers or when the condition resolves. Whereas chronic Pain on the other hand is constant and intermittent, mild to severe. Chronic pain does not even subside after taking treatment. For example, when a patient has a broken heal, he will face acute pain and over a course of condition it will eventually dissipate, but if the pain endures for months or even for years despite medical care the patient is said to have chronic pain.

Studies show that patients with foot pain have greater chances of developing depression, stress and anxiety. Keeping this view, it is important to identify and further support patients with psychological problems in the course of their diabetic treatment. As this might impact their ability to adjust and self-care. It is imperative for diabetic patients to remain healthy and satisfied with life for their speedy recovery and well-being. For this, effective self-

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management is critical and crucial step for healthy living. Organizations such as Scottish Intercollegiate Guidelines Network, The National Institute of Health and Clinical Excellence, and Institute for Clinical Systems Improvement, have incorporated evidence-based guidelines for psychosocial care in adults with diabetes.

Health professionals have concluded that when an individual goes through an emotional distress it acts as a magnifier of its pain experiences. Patients who are depressed, will have profound impact on their ability to cope and give higher pain ratings than nondepressed patients (Burckhardt et al., 1997).

Pain is strongly associated with other *psychological factors like thoughts, experiences, expectations, emotions, perceived control and attention.*

*Cognitions* are considered to influence and control our emotions and behavior. It largely effects our experience of pain, especially the evaluation of the situation and its consequence. Three important facets of cognitions that are linked to pain are attention, coping style and dysfunctional thinking. Increased attention paid to pain is associated with increased pain perception. Paying more attention towards our pain can reduce attention to other activities and therefore increases pain perceptions. The role of attention can differ from acute to chronic pain aspect of distraction. On the other hand, dysfunctional thoughts, beliefs are all automatic patterns for thinking about how one can block pain experience. Catastrophizing is the major form of dysfunctional thinking for example hopelessness about your life, pain has ruined everything and no hope to recover. Other dysfunctional thoughts include I will never get better in my life, negative bias towards situation and discounting the positive aspects of life. Whereas cognitive coping styles are strategies that patients use to overcome or deal with their pain. If effective coping is not applied, then increase in pain perception is more and increased life dissatisfaction also.

In a study conducted on diabetic patients it was taken into account that cognitive function gets affected along with brain structure in these patients. Regardless of the type of diabetes that is TYPE 1 or TYPE 11 the neuropsychological functions were monitored to be significantly reduced. Furthermore, there was evidence of patients who were diagnosed with Type 2 diabetes would likely be at an increased risk (50%) of having dementia in future. Memory and attention are known to be the basic cognitive assessments for patients. Mile et. Al., 1922 in his studies examined that diabetic patients had impaired control over these factors.

*Expectations* have also been found to play an important role in perception of pain. It has been seen that the power of medications depends on the belief system of the patients. Instant relief from pain can be caused when the doctor pretended to give a potent medicine to his patients, that was just colored water. Practitioners' expectations for the medicine to be effective is also passed to the patients, that quiet successfully led to positive results as compared to when no expectations are attached (Shapiro,1960). Thus, practitioners can communicate positive and negative expectations to their patients that can actually influence their perceptions towards their pain. Diabetes Mellitus as discussed above is a disease which is termed to be chronic in life. As much difficult it is for an individual to live with it, it also is responsible for being emotionally traumatizing to some. Every patient has to now adapt to a new lifestyle along with adopting a different attitude towards life. Expectations can become a motivating factor in life for patients to be able to function properly and live happily.

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Studies have shown that if a health care professional takes genuine interest in making their patients life better it can contribute to making the patient believe that treatment can help reducing the progress of the condition. Patients want their health care professionals to be able to be in that situation and think like them in order to trust them completely. Apart from these, different expectations are known to arise in people of different age groups affected by Diabetes, but all patients showed results of being treated with respect and courtesy. A healthy atmosphere where the patients can talk to their health care professionals about what they are going through without any fear and concern was also an expectation showed by patients of all ages.

Another factor that can impact the psychological well-being is *Perceived control*- plays substantial role in controlling pain perceptions. A sense of control, especially a belief that one's capability in controlling pain, affects perceptions of pain (Weisenberg, 1987). In one of the experiments conducted by Weisenberg 1996, demonstrated that when patients were given prior warning to receive cold pressor pain, actually decreased the level of pain the patients reported afterwards. Thus, those having higher level of self-efficacy, showed higher tolerance for pain and also rated pain episodes to be of least unpleasant. In medical terms perceived control can be referred to as a term where an individual is capable of managing himself or herself. In this case it refers to how patients who are diagnosed with diabetes deal with their illness. In a study conducted on patients with diabetes keeping in mind their knowledge about the disease and their perceived control it was manifested that it is not only important for a patient to have thorough information about how to manage themselves and what is going on with them, but also for them to be able to be self-independent to deal with the same. For having a life which has quality it is mandatory for diabetic patients to believe that they take care of their feet, maintain a healthy diet, check their blood glucose levels on a regular basis, take any medications where necessary and last but not the least self-monitor every little detail that might change over time. Patients with diabetes were seen having good mental and physical health if perceived control was good.

*Anxiety* –is linked to be the magnifier of pain. This anxious behavior will interfere in the relaxation and coping strategies of an individual that will further worsen anticipation of pain, called anticipatory anxiety. Anxiety has been related to increase fear of pain and the likelihood that one will attempt to avoid it (Asmundson et al., 1997). It is an important aspect in the medical field as patients who are anxious would tend to avoid necessary medical procedures, thus making their conditions worsen. Diabetes is known to be a manageable disease, but different people have different strategies of coping with the same. While it can be dealt by some, it can create stress in the other. Research has shown that there is a 20% chance that if someone is diagnosed with diabetes, they will end up having anxiety.

### CONCLUSION

Thus, diabetes is a rapidly rising epidemic that is posing a significant public health threat around the world. Diabetes patients are more likely to develop depression, anxiety, and personality disorders, and these symptoms can also raise the risk of developing diabetes. The most common mental illness is depression. In diabetes research, this is a consideration to consider. More research into anxiety disorders in these patients, on the other hand, needs to be done. According to the findings of a review, diabetes is linked to a 20% increased risk of developing an anxiety disorder and a 48% increased risk of having elevated anxiety symptoms. This increased anxiety may be the cause of frequent pain perception. We can classify people as augmenters and reducers which shows different individual reactions to painful situations. Augmenters are individuals trying to deal with the stimuli whereas

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reducers by being more responsiveness whereas reducers respond to the same stimuli with dampened responsiveness.

### REFERENCES

- Ahmad, A., Abujbara, M., Jaddou, H., Younes, N. A., & Ajlouni, K. (2018). Anxiety and Depression Among Adult Patients with Diabetic Foot: Prevalence and Associated Factors. *Journal of clinical medicine research*, 10(5), 411–418.
- Asmundson, G. J. G., Norton, G. R., & Allardings, M. D. (1997). Fear and avoidance in dysfunctional chronic back pain patients. *Pain*, 69(3), 231–236.
- Bloomington, MN, USA: Institute for Clinical Systems Improvement; 2004. Institute for Clinical Systems Improvement. Management of Type 2 Diabetes Mellitus.
- Burckhardt CS, Clark SR, O'Reilly CA, Bennett RM (1997). Pain-coping strategies of women with fibromyalgia: relationship to pain, fatigue, and quality of life. *Journal of Musculoskeletal Pain* 5: 5–21.
- Hernandez-Tejada, M. A., Lynch, C. P., Strom, J. L., & Egede, L. E. (2012). Effect of Perceived Control on Quality of Life in Indigent Adults with Type 2 Diabetes. *The Diabetes Educator*, 38(2), 256–262.
- Huang CJ, Chiu HC, Lee MH, Wang SY. Prevalence and incidence of anxiety disorders in diabetic patients: A national population-based cohort study. *Gen Hosp Psychiatry*. 2011; 33:8–15.
- Merriram Webster's Medical Desk Dictionary, MWMD, 1996
- Miles WR, Root HF. Psychologic tests applied to diabetic patients. *Arch Intern Med*. 1922; 30:767–777.
- Scottish Intercollegiate Guidelines Network. SIGN 55. Management of Diabetes. 2001. London: Royal College of Physicians (UK); 2004. The National Collaborating Centre for Chronic Conditions (UK). Type 1 Diabetes in Adults. National Clinical Guideline for Diagnosis and Management in Primary and Secondary Care.
- Shapiro, A. K. (1960). A contribution to a history of the placebo effect. *Behavioral Science*, 5, 109–135.
- Weisenberg, M. (1987). Psychological intervention for the control of pain. *Behaviour Research and Therapy*, 25(4), 301–312.
- Weisenberg, M., Schwarzwald, J., & Tepper, I. (1996). The influence of warning signal timing and cognitive preparation on the aversiveness of cold-pressor pain. *Pain*, 64(2), 379–385.

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### Conflict of Interest

The author(s) declared no conflict of interest.

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