

A Psychosocial Approach to Diabetes Management: A Review

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Abstract

This paper throws light on the importance of a psychosocial approach to management as a supplement to the medical treatment that the patients receive. Since diabetes is a chronic illness without a total cure, it can only be managed effectively. Having a lifelong condition impacts all aspects of one's life- the psychological, behavioural, and social. This necessitates the need to strengthen the psychosocial aspects on an individual as patients feel overwhelmed and stressed out to make necessary lifestyle changes and sustain in health promoting behaviour. Previous research suggests that patients might experience diabetes related distress or feel frustrated with the burden of diabetes self-care. Providing knowledge about different aspects of diabetes and its management along with strong social support aides patients in adapting to the condition in an easier and less stressful manner.

Keywords: Impact of diabetes, psychosocial approach, knowledge of diabetes, social support, diabetes management.

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Globalization has transformed the world and made it more inter-connected, multifaceted, and technologically advanced. Along with urbanization, economic development and modern work culture, there has been a rapid impact and change in the lifestyle of the people. There has been a significant impact on health of individuals in terms of faulty dietary patterns, and sedentary lifestyle (Chopra, Galbraith, & Darnton-Hill, 2002; Mohan et al., 2007). This has given way to the global epidemic of chronic illnesses (WHO, 2003). Reportedly 68% of the total global deaths (WHO, 2015) and 60% out of the total deaths in India were accounted due to different chronic illnesses (WHO, 2014). Around 33% of deaths due to non-communicable diseases in India are among individuals below the age of 60 (David et al., 2011). Among the various chronic illnesses, hypertension and diabetes have become epidemic diseases in India. This picture represents fundamental shortcomings in the way we address such chronic illnesses.

The growth of diabetes mellitus has been at an epidemic proportion (Bruno & Landi, 2011; IDF, 2012). The statistics shows 422 million people diagnosed with diabetes around the globe which, by 2035 is likely to reach an alarming magnitude of 592 million (IDF, 2014). The facts show that around 80 million people suffer from diabetes in India (WHO, 2014; IDF, 2014). Diabetes mellitus is classified into three types, viz-Type 1 Type II and gestational diabetes. The prevalence of Type II diabetes is found to be high compared to the other two. This type is characterised by either insufficient production of insulin or the body's inefficiency in using whatever insulin is produced by the pancreas. This condition is also known as *insulin resistance*. About 90-95% of the diabetes population suffers from this condition (WHO, 2003). Diabetes being a lifelong disease, poses a risk of developing microvascular, macrovascular and neuropathic complications. These serious health problems

usually develop after having diabetes for many years and also due to consistently high blood glucose levels.

Treatment for Diabetes

For long, diabetes has been treated from the perspective of the medical model which involves adhering to the pharmacological treatment (oral glucose-lowering agent or administering insulin) as prescribed by the physician. This has been the primary method of managing the blood glucose level within an acceptable range. The American Diabetes Association (ADA, 2000) in its review found that the treatment for Type II diabetes includes medical nutrition therapy, self-monitoring the blood glucose levels, insulin regimens and oral administration of agents that lower glucose levels when needed, need-based change in medical care treatment, and periodic screening for complications.

However, the chronic condition of diabetes can only be managed but not cured. The corner stone of diabetes treatment is *self-management* which is a “set of skilled behaviours engaged to manage one’s own illness” (Goodall & Halford, 1991). According to the Standards of Medical Care for Patients with Diabetes Mellitus (ADA, 2000), diabetes self-management is a vital component that emphasizes the need to address the individual’s role in executing self-care. This suggests that the patient and their social factors play a part by supplementing the medical care in the diabetes management. This has been viewed by health professionals as the need for a holistic approach calling for adopting the biopsychosocial model in handling diabetes. It is of paramount importance to identify the psychosocial factors contributing to management of diabetes and the quality of life of the patients. It not just affects the physiology of the person but impacts all aspects of one’s life and leads to psychological burden.

The Impact of Diabetes in Daily Life

Apart from being a public health burden, diabetes poses a daily challenge not only for the patients but also to their families. The challenge continues lifelong, with no respite, thus creating a frustration in the patients.

Psychological Aspect

To be diagnosed with diabetes itself, poses to be a traumatic event. Individuals and their families go through a process of grieving. They may face anxiety, fear, denial, anger, bargaining, depression and finally acceptance (Bowes, Lowes, Warner, & Gregory, 2009). Coping during each of these stages is crucial for coming in terms with the diagnosis and influences their ability to make necessary changes to their lifestyle, and adapt to self-care routine.

Behavioural Aspect

Right after diagnosis, patients feel overwhelmed by the amount of information they need absorb. It is challenging for every patient to bring about a change in prior lifestyle, adjusting to new therapy regimen, integrating new skills and activities into an already established daily routine appears to be difficult and distressing (Rubin & Peyrot, 2001). Thus, it impacts the individual's quality of life not only due to the disease condition but also by the demands of therapeutic interventions for disease management (Rubin, 2000). The impact spills over to the quality of life of the family members too, because of the anxiety induced by living with a patient with diabetic condition (Barnard, Speight, & Skinner, 2008).

Social Aspect

Suffering from diabetes has the potential of classifying people as a category different from "normal" society and outside the norm of 'healthy people'. Those with diabetes often perceive the stigma in connection with the condition, thereby affect not just their health but

social functioning (Barnard & Lloyd, 2011). Individuals feel pressurized to give up their dietary regimen in social setting, may forget to take their daily medication. Also many patients feel the inability to cope with their condition. Research findings suggest that feeling overwhelmed, distressed and frustrated in such people might be due to the burden of diabetes self-care (Wardian & Sun, 2014).

As diabetes impacts every aspect of an individual, a psychosocial approach in addition to the medical model has to be adopted in treating diabetes patients. Some of the psychosocial barriers to diabetes management include absence or deficit of knowledge, faulty belief system, faulty attribution patterns, lack of financial resources, low self-efficacy, low social support, poor adherence. Psychosocial factors refer to the interpersonal and intrapersonal illness variations that can be traced back to a combination of psychological, social and cultural factors. Among the barriers to maintaining good glycaemic control are knowledge deficit concerning the different aspects of the disease and absence or inadequate social support. This paper focuses on these two psychosocial factors-viz, the importance of knowledge about diabetes, and the role of social support.

Knowledge of Diabetes

Knowledge is defined as, “the fact or condition of knowing something with familiarity gained through experience or association” (Merriam-Webster’s Online Dictionary, 2015). Knowledge about any illness refers to the range of information an individual possesses concerning the condition. It consists of four aspects namely—causes, symptoms, adversities, treatment or management. Knowledge of these aspects equips the patient in effectively coping with the illness. However, diabetes patients across various socio-economic and cultural backgrounds have manifested lack of knowledge on various aspects of the condition as well as the significant dimension of self-care activities. Despite being the

diabetes capital of the world, diabetic patients in India lack adequate knowledge about the illness (Hawal, Kambar, Patil, & Hiremath, 2013).

Sources of acquiring diabetes related knowledge

The main source of acquiring health related information for general population is from family, friends, relatives, and through media such as newspapers, magazines, television and radio (Kulkarni et al., 2012). In addition to these sources, diabetes patients receive information related to diabetes from their physician, diabetologist, health care staff, magazines, or booklets (Al-Mahrooqi et al., 2013). Other factors such as family history of diabetes (Azinge, 2013), having higher educational level and higher level of income also influences knowledge related to diabetes (Al Shafae et al., 2008).

Impact of disease knowledge on diabetes self-care

Acquiring the necessary information about diabetes aides a person in assessing their vulnerability to the consequences of the condition, seek the required medical care and treatment, motivate themselves to care and cope with the condition (Alele, 2014). Knowledge of diabetes is shown to increase self-efficacy (Atak, Gurkan, & Kose, 2008) in performing self-care behaviours (McEwen et al., 2007). Acquiring knowledge contributes in making better health choices including adherence to treatment regimen (Pongmesa et al., 2009) such as regular exercise, balanced diet, regular blood glucose monitoring (Murata et al., 2003) adherence to medication leading to better control of glucose levels in blood. (Al-Qazaz et al., 2011) and reduces diabetes related distress (Fisher, Hessler, & Glasgow, 2013). Diabetes related information can also be acquired through appraisal support offered by organizing workshops in clinics, awareness programs for masses and also by the patients' social network which includes family, friends and health care professionals.

The daily burden of diabetes takes a toll emotionally and psychologically. This can be minimised through acquisition of appropriate knowledge because this knowledge in turn leads to the required medical care. This sequence is because knowledge contributes to cognitive base which in turn triggers behaviour. On the other hand, social support helps them to put their disease into a context, makes it as a part of their life, instead of inducing a 'control' or 'burden' and brings a healthy balance and good quality of life (Lustman, et al., 2000; Schram, Baan, & Pouwer, 2009). Along with knowledge about diabetes, the support received from health care providers, family and friends go a long way helping patients to initiate and sustain healthy lifestyle changes and adhering to treatment (Gleeson-Kreig, Bernal, & Woolley, 2002).

Social Support

Researchers defined social support in various ways. According to Cassel (1974), social support consists of feedback conveyed in signs and signals from primary group members that correct deviations at the behavioural, cognitive and emotional levels. Gottlieb (2000) defined social support on similar lines. He defined it as a process that involves interaction among interpersonal relationships which help in betterment of coping, enhancing self-esteem, sense of affiliation and competence through the actually existing or perceived presence of psychosocial or physical resources.

Support enables individuals to enjoy and cherish life and helps them cope with strenuous and stressful situations acting as a buffer against traumatic life events (Diener & Seligman, 2004). Higher quantity and quality of support is associated with lowering the risk of mental and physical health problems as well as mortality (Reblin & Uchino, 2008). Individual's happiness and health were found to have significant association with social connectivity (Lyubomirsky, King & Diener, 2005).

Theories of Social Support

Two theories, viz- the buffering theory and the theory of direct effects or (main effects) are dominant among all in establishing the relationship between the health and social support.

Cohen and Wills (1985) propounded the buffering theory according to which social support protects or shields the person against the negative impact of high stress, thus paving a path to sound health. This protective function is effective mainly or only during times of strong stressor. The buffering effects may occur in two ways. First, individuals with high social support are more likely to appraise the situation as less stressful than those with low social support because of their faith in their social resources. Secondly, though the initial appraisal of the situation is negative, the realisation of the presence of high social support may alter individual's response to the stressor after the initial appraisal. This helps the individuals to view the stressor as less severe because of manageability through social resources.

On the other hand, the direct effects hypothesis emphasizes that the presence of the support itself has an impact on individual's general health and well-being both in the face of stress as well as in its absence. This is because the sustained interaction with the support network triggers a sense of affiliation and boosts the self esteem (Cassel, 1976) which has a positive influence on health in general and helps to keep stress at a bay.

Different Perspectives and Types of Social Support

Researchers differ in the way they categorize the types of social support, however, they usually agree upon the following types:

Instrumental or tangible support

It refers to providing tangible or concrete assistance in terms of financial aid, material resources or needed/ instrumental services (Sanderson, 2013). It can include a wide range of activities such as, taking care of children, lending or donating money, helping out with household chores, running errands, providing transportation, looking after the household while the owners are away and providing material goods such as furniture or tools (Uchino, 2004).

Informational or appraisal support

The term refers to the process of receiving information, advice and guidance from others. This includes providing information about the root cause of the problem, and helps the individual in understanding or appraising the problem with a different perspective and find out which resources and coping strategies they need to use to deal with it (Friedman & Silver, 2007). This includes, giving advice on how to handle a personal or professional problem, giving information on management of the illness or guiding in seeking help or suggesting best medical care providers. This kind of support operates as a buffering process (Uchino, 2004).

Emotional support

This kind of support refers to the perception of expressed concern, care, warmth and empathy, love, reassurance, comfort, nurturance and encouragement by others in a stressful state (Friedman & Silver, 2007). Individuals who face stressful events feel the need to share about the events and providing a 'listening ear' is greatly valued (Sanderson, 2013). Support helps the person to openly express and ventilate his/her feelings and beliefs. It helps in providing a sense of acceptance and provides constructive and positive direction to the individual.

Belongingness support

The support provided by social relationships is that of social companionship or belongingness that includes enjoying the company of others in social activities such as going out for a dinner/ party, movie/ concert, or camping/ sports activities. Such kind of everyday pleasurable activities provide access to more instrumental and esteem support due to shared interests, reciprocity and closer relationships. This kind of belongingness or companionship is a major contributor to positive mood (Maestas, Vaquera, & Munoz Zehr, 2007).

Though there are many types of social support, the functions are beneficial to specific conditions or stressful events. Researchers have proposed the term *matching hypothesis* (Cohen & Wills, 1985) according to which the efficacy/ usefulness of any form of social support will depend on the extent to which the support meets the demands of the specific stressful event. For example, coping with a medical diagnosis may be difficult and uncontrollable in the beginning, but adapting and learning to manage the condition is controllable, and at different stages, different kind of support is needed. However, emotional and informational support were found to contribute positively throughout life across situations and events (Lindorff, 2005).

Sources of Social Support

Support is received from different types of social relationships, such as intimate/personal relationships (spouse, family, relatives, co-workers and friends), formal organizations that are not related to one's work (medical professionals, service/charity organizations, school boards, social clubs, religious/ cultural organizations), and social contacts from active leisure activities (attending classes like swimming, aerobics, gym). Sometimes social support is also sought for and obtained from peers going through the same condition/illness, called peer-support groups. This kind of help or action is sought out when

social network of the person is inadequate or unsuitable in meeting the requirements of the individual (Helgeson & Gottlieb, 2000).

Impact of Social Support on Diabetes Management

As mentioned, social support has an influence on individual's appraisal of the situation, and helps them in adapting health-promoting behaviours. Social support acts as one of the major psychosocial factors in enabling the diabetic patients to adjust and adhere to self-care activities. Having social support is crucial for diabetes patients as they can receive support in the form of information, advice, knowledge, required materials, and emotional support that buffers them against "diabetes burnout" (Clark, 2008). Social support also helps in developing suitable coping strategies to deal with stress of having the illness and bringing about a structure to daily routine and reduce the likelihood of poor health by following the treatment regimen (Kadirvelu, Sadasivan, & Ng, 2012). Adopting healthy lifestyle and bringing about behavioural changes to manage diabetes helps in achieving optimum glycaemic control, and minimize or prevent diabetes related complications (Sousa, Zauszniewski, Musil, Price Lea, & Davis, 2005).

In conclusion, it can be said that receiving and possessing knowledge about diabetes aids in management. They can receive such information primarily from health care professionals, family and friends. Health care workers, especially the primary care providers and physicians must be empathetic towards the patients and understand the psychosocial adjustments and difficulties that the patients need to make, along with their biomedical needs. This is also important as individuals may have the same level of physical health but can differ in their levels of well-being and functioning. The support from health care providers, family and friends becomes essential as the newly diagnosed patient would still be grappling with their status if being a "diabetic" and support and information is welcomed as they try to learn self-management.

References

- Alele, F. O., & Ilesanmi, O. S. (2014). Knowledge and Attitude of a Semi Urban Community in the South-South Region of Nigeria towards Diabetes Mellitus. *American Journal of Public Health Research*, 2(3), 81-85. doi:10.12691/ajphr-2-3-3
- Al-Mahrooqi, B., Al-Hadhrami, R., Al-Amri, A., Al-Tamimi, S., Al-Shidhani, A., Al-Lawati, H., ...& Al-Ghafri, T. (2013). Self-reported knowledge of diabetes among high school students in Al-Amerat and Quriyat, Muscat Governate, Oman. *SultanQaboos University Medical Journal*, 13(3), 392. Retrieved from <http://web.squ.edu.om/squmj/index.asp>
- Al-Qazaz, H. Kh., Sulaiman, S. A., Hassali, M. A., Shafie, A. A., Sundram, S., & Al-Nuri, R. (2011) Diabetes knowledge, medication adherence and glycemic control among patients with type 2 diabetes. *International Journal of Clinical Pharmacy*, 33(6), 1028–1035. doi: 10.1007/s11096-011-9582-2
- Al-Shafae, M. A., Al-Shukaili, S., Rizvi, S. G. A., Al Farsi, Y., Khan, M. A., Ganguly, S. S., Afifi, M., & Al Adawi, S. (2008). Knowledge and perceptions of diabetes in a semi-urban Omani population. *BioMedCentral Public Health*, 8(1), 249. doi:10.1186/1471-2458-8-249
- American Diabetes Association. (2000). Standards of medical care for patients with diabetes mellitus. *Diabetes Care*, 23(1), 32-42.
- Atak, N., Gurkan, T., & Kose, K. (2008). The effect of education on knowledge, self-management behaviours and self-efficacy of patients with type 2 diabetes. *Australian Journal of Advanced Nursing*, 26(2): 66–74.
- Azinge, N. (2013). Healthy adolescents' knowledge of diabetes mellitus in a semi-urban community in South-South Nigeria. *Orient Journal of Medicine*, 25(3-4), 126-130. Retrieved from www.orientjom.com

- Barnard, K. D., Speight, J., & Skinner, T. C. (2008). Quality of life and impact of continuous subcutaneous insulin infusion for children and their parents. *Practical Diabetes International*, 25, 278–283.
- Barnard, K., & Lloyd, C. E. (2011). Experiencing depression and diabetes. In: C. E. Lloyd, & T. D. Heller (Eds.), *Long term conditions; challenges in health and social care*. London: Sage Publications. ISBN 978-0- 85702-749-8, 978-0-85702-750-4.
- Bowes, S., Lowes, L., Warner, J., & Gregory, J. W. (2009). Chronic sorrow in parents of children with type 1 diabetes. *Journal of Advanced Nursing*, 65(5), 992–1000. doi: 10.1111/j.1365-2648.2009.04963.x.
- Bruno, G., & Landi, A. (2011). Epidemiology and costs of diabetes. *Transplantation Proceedings*, 43(1), 327–329.
- Cassel, J. C. (1974). Psychosocial processes and stress: Theoretical formulations. *International Journal of Health Services*, 4, 471–482.
- Cassel, J. C. (1976). The contribution of the social environment to host resistance. *American Journal of Epidemiology*, 104:107–123.
- Chopra, M., Galbraith, S., & Darnton-Hill, I. (2002). A global response to a global problem: The epidemic of over-nutrition. *Bull WHO*, 80, 952–958
- Clark, M. (2008). Diabetes self-management education: A review of published studies. *Primary Care Diabetes*, 3:113–120.
- Cohen, S., & Wills, T. A. (1985). Stress, social support, and the buffering hypothesis. *Psychological Bulletin*, 98, 310–357.
- David, R. W., et al. (2011). IDF Diabetes Atlas: Global estimates of the prevalence of diabetes for 2011 and 2030. *Diabetes Research and Clinical Practice*, 94 (3), 311–

321.

Retrieved

from

<http://www.sciencedirect.com/science/article/pii/S0168822711005912>

Diener, E., & Seligman, M. E. P. (2004). Beyond money: Toward an economy of well-being.

Psychological Science in the Public Interest, 5(1), 1-31.

Fisher, L., Hessler, D., Glasgow, R. E., et al. (2013). REDEEM: A pragmatic trial to reduce diabetes distress. *Diabetes Care*, 36: 2551–2558

Friedman, H. S., & Silver, R. C. (2007). *Foundations of Health psychology*. New York, USA: Oxford University Press.

Gleeson-Kreig, J., Bernal, H., & Woolley, S. (2002). The role of social support in the self management of diabetes mellitus among a Hispanic population. *Public Health Nursing*, 19 (3), 215-222.

Goodall, T., & Halford, N. K. (1991). Self management of diabetes mellitus: A critical review. *Health Psychology*, 10, 1-8.

Gottlieb, B. (2000). Selecting and planning support interventions. In S. Cohen, L. Underwood, & B. Gottlieb (Eds.), *Social support measurement and intervention* (pp. 195- 220). London: Oxford University Press

Hawal, N. P., Kambar, S., Patil, S., & Hiremath, M. B. (2013). Knowledge, attitude and behaviour regarding self-care practices among Type 2 Diabetes Mellitus patients residing in an urban area of South India. *International Multidisciplinary Research Journal*, 2(12). Retrieved from <http://irjs.info/index.php/irjs/index>

Hegelson, V. S., & Gottlieb, B. H. (2000). Support groups. In S. Cohen., L.G. Underwood., & B. G. Gottlieb (Eds.), *Social Support measurement and Intervention: A Guide for Health and Social Scientist* (pp 221-245). Oxford: Oxford University Press.

IDF Diabetes Atlas. (2012). *International Diabetes Federation*. Retrieved from

<http://www.idf.org/diabetesatlas>

International Diabetes Federation. (2014). *IDF Diabetes Atlas* (6th ed.). Retrieved from

http://www.idf.org/sites/default/files/Atlas-poster-2014_EN.pdf

Kadirvelu, A., Sadasivan, S., & Ng, S. H. (2012). Social support in type II diabetes care: A case of too little, too late. *Journal of Diabetes, Metabolic Syndrome and Obesity*, 5: 407–417.

Kulkarni, G. V., Udgiri, M., Angadi, M. M., & Sorganvi, V. M. (2012). Knowledge about diabetes mellitus and its control among college students. *International Journal of Current Research and Review*, 4(19), 83-87. Retrieved from <http://www.ijcrr.com/>

Lindorff, M. (2005). Determinants of received social support: Who gives what to managers? *Journal of Social and Personal Relationships* 22(3):323-337. doi:

10.1177/0265407505052439

Lustman, P. J., Anderson, R. J., Freedland, K. E., de Groot, M., Carney, R. M., & Clouse, R. E. (2000). Depression and poor glycemic control: A meta-analytic review of the literature. *Diabetes Care*, 23(7):934–42.

Maestas, R., Vaquera, G. S., & Munoz Zehr, L. (2007). Factors impacting sense of belonging at a Hispanic-serving institution. *Journal of Hispanic Higher Education*, 6, 237-256.

Merriam-Webster's online dictionary. (2015.). Retrieved March 10, 2015, from <http://www.merriam-webster.com/dictionary/knowledge>

Mohan, V. S., Sandeep, S., Deepa, R., Shah, B., & Varghese, C. (2007). Epidemiology of type 2 diabetes: Indian scenario. *Indian Journal of Medical Research*, 125, 217-230.

- Pongmesa, T., Li, S. C., & Wee, H. L. (2009). A survey of knowledge on diabetes in the central region of Thailand. *Value in Health, 12*(s3), S110-S113. doi: 10.1111/j.1524-4733.2009.00641.x.
- Reblin, M., & Uchino, B. N. (2008). Social and emotional support and its implication for health. *Current Opinion in Psychiatry, 21*, 201–5.
- Rubin, R. R. (2000). Diabetes and quality of life. *Diabetes Spectrum, 13*(1), 21-25.
- Rubin, R. R., & Peyrot, M. (2001). Psychological issues and treatments for people with diabetes. *Journal of Clinical Psychology, 57*, 457-478.
- Sanderson, C. A. (2013). *Health Psychology* (2nd ed.). New Jersey, USA: John Wiley & Sons. Inc.
- Schram, M. T., Baan, C. A., & Pouwer, F. (2009). Depression and quality of life in patients with diabetes: a systematic review from the European depression in diabetes (EDID) research consortium. *Current Diabetes Review, 5*(2):112–9.
- Sousa, V., Zauszniewski, J., Musil, C., Price Lea, P., & Davis, S. (2005). Relationships among self-care agency, self-efficacy, self-care, and glycemic control. *Research Theory for Nursing Practice Journal, 19*(3), 217–230.
- Uchino, B. N. (2004). *Social support and physical health: Understanding the health consequences of physical health*. New Haven, CT: Yale University Press.
- Wardian, J., & Sun, F. (2014). Factors associated with diabetes-related distress: Implications for diabetes self-management. *Social Work in Health Care, 53*(4), 364-81. doi: 10.1080/00981389.2014.884038.

World Health Organization. (2003). *Diet, nutrition and the prevention of chronic diseases: A report of a joint WHO/ FAO expert consultation*. Geneva, Switzerland: World Health Organization.

World Health Organization. (2014). *Noncommunicable diseases - Mortality- Total NCD Deaths* . Retrieved from: <http://apps.who.int/gho/data/node.main.A860?lang=en>

World Health Organization. (2015). *Global Health Observatory (GHO) data, NCD mortality and morbidity*. Retrieved from: http://www.who.int/gho/ncd/mortality_morbidity/ncd_total/en/