

29th International Congress on

Prevention of Diabetes and Complications

September 27-28, 2018 | Berlin, Germany

Effectiveness of nurse case management and peer support in improvement of glycemic control among diabetes mellitus patients in the teaching hospital, Batticaloa District, Sri Lanka

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Diabetes Mellitus (DM) is a growing serious health problem and causing significant morbidity and mortality worldwide including in Sri Lanka. In many countries, the Nurse case management has become the keystone of self-management of DM which empowers patients to be informed about their disease, treatment modalities and preventive measures of complications for better outcomes. The peer support is also recognized as a promising approach for self-management of DM. The study was aimed to assess the effectiveness of self-management of DM through nurse case management and peer support intervention in improvement of glycemic control among patients with DM in the Teaching Hospital, Batticaloa, Sri Lanka. This was a single blinded randomised controlled trial. A total of 63 patients were randomized to one of three groups; a control group (n=21), an intervention group with nurse case management (n=21) and an intervention group with nurse case management with peer support (n=21). Glycosylate hemoglobin value (HbA1c) was measured as the primary outcome. At all phases the significance level was tested at 5%. After the 16 weeks of intervention, the HbA1c level declined by 1.92% in the nurse case management participants and by 1.76% in the nurse case management with peer support participants, but an increase of 0.13% was observed in the control participants (p=0.000). The secondary outcome measures, FBS, waist and hip circumferences, blood pressure have been significantly improved in nurse case management with peer support participants and followed by nurse case management participants compared to the control participants (p<0.05). Further, there was no statistically significant difference in body mass index (BMI) across the groups (p=0.071). However, these two groups were associated with a numerically greater decrease in BMI than control group [1.53 kgm² (±2.42) vs. 1.53 kgm² (±1.86) vs. 0.37 kg/m² (±1.36)]. Assessment of the effectiveness of self-management of DM through intervention by nurse case management and peer support using intervention guide had revealed successful and positive outcomes on glycemic control among DM Tamils. It has revealed that peer support groups had more influence over better outcome. Peer support groups with nurses providing health education for the patients with DM based on the intervention guide could be incorporated into regular clinical care of patients.

Recent Publications

1. American Diabetes Association, 2017b. Standards of medical care in diabetes: Introduction. *Diabetes Care*, 40 (Suppl. 1), pp. S1-S2.
2. Deng, K., Ren, Y., Luo, Z., Du, K., Zhang, X. and Zhang, Q., 2016. Peer Support Training Improved the Glycemic Control, Insulin Management, and Diabetic Behaviors of Patients with Type 2 Diabetes in Rural Communities of Central China: A Randomized Controlled Trial. *Medical Science Monitor : International Medical Journal of Experimental and Clinical Research*, 22, pp. 267-275.
3. Haas, L., Maryniuk, M., Beck, J., Cox, C.E., Duker, P., Edwards, L., et al., 2014. National Standards for Diabetes Self-Management Education and Support. *Diabetes Care*, 37(Suppl 1), pp. S144-S153.
4. Illangasekera, U., 2011. Towards a cost-effective delivery of diabetes care in Sri Lanka. *Sri Lanka Journal of Diabetes Endocrinology and Metabolism*, 1, pp. 55-57.
5. Watts, S.A., Lawrence, R.H. and Kern, E., 2011. Diabetes nurse case management training program: enhancing care consistent with the chronic care and patient-centered medical home models. *Clinical Diabetes*, 29 (1), pp. 25- 31.
6. Zeng, Z., Shuai, T., Yi, L.J., Wang, Y. and Song, G., 2016. Effect of case management on patients with type 2 diabetes mellitus. *Chin Nurs Res*, 3(2), pp. 71-76.

Biography

G Kisokanth has completed his PhD on Diabetes self-management and he is a Senior Lecturer at Faculty of Health-Care Sciences, Eastern University, Sri Lanka. He has published more than 20 papers in journals as well as international conferences. His research interests include Non-communicable diseases, nutrition, primary care and nursing education.

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